

Significant Placer Districts of Russian Far East, Alaska, and the Canadian Cordillera

District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
L54-01 47°58'N 142°16'E Gold is fine, 0.2 to 0.3 mm. Heavy-mineral concentrate consists of chromite, epidote, and garnet. Small gold-cinnabar occurrences are presumably sources for the placer. Deposit occurs along the Il'inka River near where it discharges into Tatar Strait. Alluvium of the first (lowest) floodplain terrace is gold-bearing. V.D. Sidorenko , 1977.	Il'inka River Placer Au	Au	Size: Small.
M10-01 50°50'N 122°50'W Gold occurs in gravels of ancient river channels, and reworked gravels in modern river bed and banks. The bedrock to the gravels is Shulaps serpentinite and Bridge River slate. The source of the gold may be quartz-pyrite-gold veins that are hosted in Permo-Triassic diorite, gabbro and greenstone within the Caldwellader Break, including Bralorne and Pioneer mines. Primary mineralization is associated with Late Cretaceous porphyry dikes. Bridge River area was worked for placer gold as early as 1860, but production figures were included with Fraser River figures until 1902. B.C. Minfile, 1991.	Bridge River Camp Placer Au	Au	Production of 171 kg fine Au. Years of Production: 1902-1990. Fineness: 812-864
M10-02 53°40'N 122°43'W Gold first found on a tributary of the Fraser River in 1857. Large amounts of gold were found shallowly buried in bars on the lower river in 1858. Gold occurs along several hundred miles of the Fraser. Fine gold was found as far as 25 miles below Hope. Coarse gold occurs further up river, as far as Lillooet. Coarse gold was considered of local origin, eroded from belts of argillite and micaceous schists along the river. Mesothermal gold-quartz veins of the Carolin camp, hosted in Permo-Jurassic sediments of Hozameen and Ladner groups, are one possible source of placer gold. The Fraser River fault zone follows a major inter-terrane suture that includes the Coquihalla serpentinite belt plus numerous granitoid plutons all of which may have been controlling factors on the emplacement of original lode-gold veins. Fine gold was probably reworked from glacial gravels and transported considerable distances from the source. Some platinum and iridium have also been found near Lytton. British Columbia Department of Energy, Mines, and Petroleum Resources Bulletin 21, 1963; B.C. Minfile, 1989.	Fraser River Placer Au, Pt, Ir	Au	Production of 5689 kg fine Au. Years of Production: 1857-1990. Fineness: 855-892
M10-03 51°27'N 120°13'W Placer gold-bearing creeks are underlain by volcanic rocks of the Nicola Assemblage and metasedimentary rocks of underlying Harper Ranch Group, both intruded by Early Jurassic plutons of the Guichon and Copper Mountain Suites. Polymetallic Au-Ag veins, as at Vidette, associated with the plutons are a probable source of placer gold. B.C. Minfile, 1989.	North Thompson-Tranquille Placer Au	Au	Production of 424 kg fine Au. Years of Production: 1852-1990. Fineness: 827-916

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M10-04 49°26'N 120°31'W	Tulameen-Similkameen Camp Placer Au-Pt-Ag	Au	Production of 1171 kg fine Au. Years of Production: 1853-1990. Fineness: 869-889
Gold discovered on Similkameen River in 1853. Platinum and gold are recovered from the Tulameen River and its tributaries, in some places more platinum than gold was recovered. Estimated up to 20,000 oz of platinum were recovered between 1885-1963. The origin of the platinum is the Upper Triassic Tulameen mafic-ultramafic complex, cut by the Tulameen River. It occurs with gold in black sands. Gold is generally rough and angular, sometimes with quartz adhering to it. The source of the gold is believed to be the auriferous veins of Grasshopper Mountain. Since the area is blanketed in glacial material, erosion of gold and platinum from the host rock must have occurred in pre-glacial times. Post-glacial streams have reworked some of the older placers.			
Rice, 1960; British Columbia Department of Energy, Mines, and Petroleum Resources Bulletin 21, 1963; Boyle, 1976; B.C. Minfile, 1992.			
M10-05 49°24'N 121°13'W	Coquihalla River Camp Placer Au, Pt	Au	Production of 3.9 kg fine Au. Years of Production: 1874-1990. Fineness: 850-901
District is underlain by the Coquihalla Serpentine Belt, comprised chiefly of serpentinite intersected by large and small dioritic dikes and a few quartz-porphyry dikes.			
B.C. Minfile, 1988.			
M10-06 48°30'N 123°44'W	Leech River Camp Placer Au	Au	Production of 277 kg fine Au. Years of Production: 1864-1940. Fineness: 864-890
Placer gold occurs in gravels of streams that drain slaty schists of the Jurassic to Cretaceous Leech River Formation. The drainages occupy in part the Leech River fault that separated Leech River Formation of Pacific Rim Terrane to the north from Tertiary Metchosin volcanics of the Crescent Terrane to the south. Gold in Recent gravels is probably derived from small auriferous quartz veins and stringers in the schists. Veins are too small to be mined. Placer gold also occurs in coastal areas in what appears to be remains of a glacial delta that drained the Leech River valley. Gold was found on the Leech River in 1864.			
British Columbia Department of Energy, Mines, and Petroleum Resources Bulletin 21, 1963; B.C. Minfile, 1990.			
M11-01 51°39'N 118°37'W	Big Bend Camp Placer Au	Au	Production of 2678 kg fine Au. Years of Production: 1864-1990. Fineness: 901-910
Coarse grains and nuggets of gold occur along bedrock in McCulloch Creek and French Creek, and fine colors in gravel probably have their source in quartz-gold veins in the headwaters of McCulloch and Graham Creeks. Area is underlain by Paleozoic metasedimentary rocks of the Shuswap region of Kootenay terrane, on the northeastern flank of the Monashee terrane.			
Holland, 1950; Wheeler, 1965; British Columbia Department of Energy, Mines, and Petroleum Resources Bulletin 21, 1963; B.C. Minfile, 1988.			
M11-02 50°22'N 116°57'W	Lardeau-Duncan and Lake-Bugaboo Placer Au, U Th, Nb	Au U Th, Nb	Production of 15.9 kg fine Au. Years of Production: 1850-1990. Fineness: 792-845
Districts contain several creeks that drain the Cretaceous Bugaboo Batholith. Placers contain concentrations of uranium, thorium, and niobium. Reserves for Vowell Creek are 15,292,000 m ³ at 18.1 g/t U and 196.28 g/m ³ Nb ₂ O ₅ . Malloy Creek reserves are 9,330,000 m ³ , 19.6 g/m ³ U, 97.85 g/m ³ Nb ₂ O ₅ and 68.8 g/m ³ thorium oxide. Upper Bugaboo Creek reserves are reported as 1,000,000 m ³ with 0.18% U. Auriferous quartz-filled shears occur in schists of Lardeau and Hamill groups. There is a gradation from quartz-pyrite-gold veins to quartz-galena-sphalerite-pyrite-gold veins.			
Galloway, 1932; Reesor, 1973; Northern Miner, October 25, 1979; B.C. Minfile, 1987.			

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M11-03 50°18'N 119°28'W Placer gold deposits are underlain by volcanic rocks of Nicola Group and underlying sedimentary rocks of Late Paleozoic Harper Ranch Group. Minor Cu-Ag veins occur in volcanic rocks and occur along intrusive contacts. British Columbia Department of Energy, Mines, and Petroleum Resources Bulletin 21, 1963; B.C. Minfile, 1985.	Okanagan Valley Placer Au	Au	Production of 115 kg fine Au. Years of Production: 1861-1990. Fineness: 842-920
M11-04 50°13'N 118°32'W Placer gold occurs in the gravels of a pre-glacial Cherry Creek. The existing river closely follows the old river course. Quartz veins occur in shales of the Shuswap region of Kootenay Terrane. Galloway, 1930; B.C. Minfile, 1985.	Monashee-Cherry Creek Camp Placer Au	Au	Production of 181 kg fine Au. Fineness: 700-845
M11-05 49°05'N 119°07'W Placer gold deposits are underlain by oceanic sedimentary and volcanic rocks of the Ordovician to Triassic Old Tom and Shoemaker formations of the Okanagan subterranean of Quesnellia. Numerous lode gold-silver vein deposits are known in the region, as at Camp McKinney, that probably served as a source of placer gold. Holland, 1950; British Columbia Department of Energy, Mines, and Petroleum Resources Bulletin 21, 1963.	Boundary-Kettle River Placer Au	Au	Production of 388 kg fine Au. Fineness: 831-866
M11-06 49°26'N 120°31'W Placer gold interpreted as derived from potentially economic polymetallic Au-Ag- quartz vein deposits that occur in shear zones in the area. W skarns are associated with plutons of the mid-Cretaceous Bayonne suite. Ymir area is underlain by schists of Triassic Ymir and lower Jurassic Rossland Groups that are intruded by apophyses of Jurassic Nelson batholith. Galloway, 1932; B.C. Minfile, 1991.	Ymir-Nelson-Slocan Camp Placer Au-W	Au	Production of 19 kg fine Au. Fineness: 861-894
M11-07 49°08'N 117°15'W Placer gold interpreted as derived from polymetallic Au-Ag veins at Sheep Creek, Ymir, and Rossland, and from Au-Zn-Pb deposits in Kootenay terrane. At Sheep Creek sheared gold veins and lead-zinc replacements in limestone occur in anticlines formed in quartzite and argillite of the Nevada and Nugget members of the Quartzite Range formation. Galloway, 1932; B.C. Minfile, 1991.	Pend D'Oreille-Sheep Creek Placer Au	Au	Production of 228 kg fine Au. Years of Production: 1855-1874. Fineness: 815-861
M11-08 49°23'N 116°00'W Placer gold occurs in Tertiary channels in Moyie River gravels. Bedrock geology consists of oxidized and fractured argillite and massive quartzite of Middle Proterozoic Aldridge Formation in contact with Moyie diorite sills. Higher gold grades occur at the bedrock/Tertiary channel interface. Base metal sulfide deposits with minor gold contents that occur in turbidites of the Aldridge Formation are a probable source of placer gold. B.C. Minfile, 1986; B.C. Minfile, 1989.	Moyie-Goat River Camp Placer Au	Au	Production of 2727 kg fine Au. Years of Production: 1867-1990. Fineness: 861-905

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M11-09 55°33'N 123°23'W Placer gold first found on the Wild Horse River in 1863. The Wild Horse and Bull Rivers are among the few rivers that drain westward from the Rocky Mountains that contain coarse placer gold. Fine gold and platinum occur in the Peace, Findlay, McLeod and Parsnip Rivers. The rivers drain the Mississippian Slide Mountain Group. Placer deposits occur in Recent gravels. British Columbia Department of Energy, Mines, and Petroleum Resources Bulletin 21, 1963; B.C. Minfile, 1991.	Wildhorse Creek Camp Placer Au-Pt	Au	Production of 10,751 kg fine Au. Years of Production: 1863-1990. Fineness: 878-938
M52-01 51°55'N 131°55'E District occurs in the Turansky subterrane (BUT) of the Bureya terrane. District is subdivided into the Byssinsky, Ulmiisky, and Aleunsky subdistricts. Only the Byssinsky subdistrict is of economic importance. The only lode source is the unexplored Buyanovsky occurrence. In this subdistrict, Precambrian metamorphic rocks are overlain by Early Cretaceous volcanic rocks. A large placer was discovered on the Sinnikan River and its tributaries. Length is 9 km, average width is 80 m, thickness of economic bed is 0.54 m, and gold grade in economic bed is 1059 mg/m ³ . Proven reserves of the placer are 980 kg. Much placer gold is concentrated in tributaries of the Sinnikan River. V.D. Melnikov and others, written commun., 1989.	Turansky district Placer Au	Au	Production of 0.3 tonne Au. Proven reserves of 6.0 tonnes Au; inferred reserves 29.0 tonnes Au; total of 35.0 tonnes Au. Fineness: 937
M52-02 50°50'N 127°25'E District occurs in an area adjacent to the Amur River from the city of Blagoveshchensk to the village of Chenyaevo, and along the Zeiya River from the mouth to the Selemdzha River. This area is overlain mostly by unconsolidated deposits of the Amur-Zeiya valley. Bedrock outcrops occur near the Amur River are part of the Norsk-Sukhotinsky terrane. Gold deposits in the district have been known since the beginning of the century when prospectors started operations on bars and islands of the Amur and Zeiya Rivers. The Surazhevka bar placer, in the Zeiya River near the town of Svobodny, has been mined. The most promising area for placer deposits is the northern bank of the Amur River from the city of Blagoveshchensk to the village of Ushakovka. This area continues into China, on the opposite bank of the Amur River, where it is known as the Fabelakhe subdistrict. Dzu Sung, 1991; V.D. Melnikov and others, written commun., 1989.	Blagoveshchensk-Svobodnensky district Placer Au	Au	Production of 1.0 tonnes Au. Proven reserves of 0.0 tonnes Au; inferred reserves of 10.0 tonnes Au, total 11.0 tonnes Au..

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M52-03 49°10'N 130°55'E	Malokhingansky (Malokhingan) district Placer Au	Au	Production of 4.0 tonnes Au. Proven reserves of 1.0 tonne Au, inferred reserves of 18.0 tonnes Au; total of 23.0 tonnes Au.

District is subdivided into the Nizhnebureisky and Arkharinsky gold-bearing subdistricts. The largest lode deposit in the area is the Prognoznoe deposit, located within the Nizhnebureisky subdistrict. This deposit was discovered in 1972 during geologic mapping. Small placers (in the Simichi River and Gnloi Spring) were discovered in 1972 near the Prognoznoe lode deposit. Placer gold is derived from nearby lode deposits.

Arkharinsky subdistrict occurs in the southeastern part of the Malokhingansky district. Bedrock is mainly Early Paleozoic and Early Mesozoic granitic rocks. Neogene-Quaternary basalt locally locally overlies unconsolidated Cenozoic deposits in the headwaters of the Maly Bira and Uril Rivers. Estimated placer gold potential was already considered high at the beginning of this century. The location near a railroad and character of the deposits (mineable by dredging) make this a very promising area. Richest placers were mined in the area of the Maly Bira River. Undiscovered placer deposits may occur beneath the basalt. Deposits as at Paskhalny Spring were completely mined out by underground mining in the 1950s. Mesozoic and Cenozoic sedimentary units may also contain old placer deposits.

V.D. Melnikov and others, written commun., 1985.

M54-01 50°49'N 139°37'E	Oemku Placer Au	Au	Size: Small. Fineness: 800-850
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Placer gold occurs in stream deposits of the Oemku River and other northern tributaries of the Muli River, which in turn flows into the Tumnin River. Gold-bearing beds contain fine and medium gold. Gold is derived from the Oemku lode deposit which contains gold-rich quartz veins. Local bedrock is Early Cretaceous siltstone and sandstone.

A.M. Peshkov, written commun., 1972.

M54-02 50°10'N 142°57'E	Langeriiskoe Placer Au	Au	Size: Medium. Fineness: 879-932
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District occurs in several river valley placers that range from 1000 to 7200 m long and 20 to 30 m wide. A zone of alluvium, from 1.8 to 2.0 m thick adjacent to bedrock, is most enriched in gold. Grains of gold range in size: from less than 0.5 mm (30%), 0.5 to 1.0 mm (33%), 1.0 to 2.0 mm (26%), to more than 2.0 mm (11%). Chromite, pyrite, zircon, rarely cinnabar, scheelite, arsenopyrite, galena, and hematite also occur in heavy concentrates. Placer gold is derived from Au quartz vein deposits in quartz-micaceous schist.

V.D. Sidorenko, 1977.

M57-01 51°33'N 156°33'E	Ozyornaya River Placer magnetite	Ti, Fe	Reserves: Estimated 261,000 tons titanomagnetite concentrate.
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District is 8.6 km long, 20 to 85 m wide, and 8 m thick, and is associated with recent beach sand deposits. Sand is sorted, coarse- and fine-grained, and polymictic. Minerals are magnetite (up to 31%), titanomagnetite, quartz, feldspar, pyroxene, amphibole, olivine, epidote, ilmenite, and hematite; minor garnet, leucoxene, apatite, zircon, andalusite, and rutile; and rare gold, cinnabar, sphalerite, and scheelite. Deposit is estimated to contain equivalent of 261,000 tons of titanomagnetite concentrate. Chemical analyses of placer sediments show 8.07 to 14.17% Fe₂O₃, 0.92 to 2.09% TiO₂, trace to 1 g/t Au, and 1.1 to 4.4 g/t Ag.

M.F. Kobylkin, written commun., 1966.

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N09-01 54°53'N 128°24'W District occurs in drainages that erode flat-lying conglomerate, argillite, and sandstone of Jurassic to Cretaceous Bowser Lake Group. Coarse placer gold occurs in drift-filled pre-glacial channels. Placer gold interpreted as derived from Au quartz vein deposits that occur in the area and related to post-accretionary intrusions of Skeena and Bulkley plutonic suites. B.C. Minfile, 1989.	Skeena River Placer Au	Au	Production of 129 kg fine Au. Fineness: 827-861
N10-01 55°45'N 124°40'W Gold initially found on Germansen Creek in 1870. Much of the gold is coarse. Gold occurs in modern stream gravels, reworked from glacial deposits. Area is underlain by schistose phyllite, argillite and felsic tuff of the Mississippian(?) to Lower Permian Cooper Ridge Group of Slide Mountain Terrane, and Middle Triassic to Lower Jurassic Takla Group of Quesnellia terrane. Bedrock units are intruded by numerous small bodies of granite. Polymetallic Au-Ag quartz veins are common in the schist and are interpreted as the source of gold. Galloway, 1930; Galloway, 1932; British Columbia Department of Energy, Mines, and Petroleum Resources Bulletin 21, 1963; B.C. Minfile, 1992.	Manson Camp (Omineca) Placer Au	Au	Production of 1829 kg fine Au. Years of Production: 1870-1990. Fineness: 847-895
N10-02 55°42'N 125°28'W Gold was initially found on Vital Creek in 1869. Much of the gold is coarse. Native copper and arquerite (silver amalgam) also occur but not economic. Area is underlain by metasedimentary and metavolcanic rocks of the Carboniferous to Jurassic Cache Creek Complex. Phyllite, limestone and tuff, the most common bedrock, and contain numerous rusty quartz veins up to one meter wide, that may be the source of gold. Nephrite jade boulders occur on Vital Creek. Galloway, 1930; British Columbia Department of Energy, Mines, and Petroleum Resources Bulletin 21, 1963; B.C. Minfile, 1992.	Vital-Silver Creek Camp (Omineca) Placer Au, Cu, Ag, nephrite	Au	Production of 500 kg fine Au. Years of Production: 1869-1949. Fineness: 846-888
N10-03 52°34'N 121°30'W Placer gold deposits have been worked on Hixon Creek since 1874. Placer gold occurs in Tertiary basal conglomerate, and in remnants of pre-glacial channels and in post-glacial deposits. Area is underlain by Takla Group metasedimentary rocks. Placer gold interpreted as derived from Au quartz veins that are associated with granitoid intrusive bodies. Galloway, 1932; B.C. Minfile, 1989.	Cariboo-Hixon Camp Placer Au	Au	Production of 4449 kg fine Au. Years of Production: 1874-1990. Fineness: 787-872

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N10-04 53°06'N 121°35'W District is underlain by greenschist facies metasedimentary rocks of the Upper Proterozoic to Lower Paleozoic Snowshoe Group in the Kootenay terrane, and in Mesozoic sedimentary and volcanic rocks of Quesnellia terrane. Placer deposits interpreted as derived from the Downey Creek Formation of the Snowshoe Group that contains Au quartz veins. In the Pleistocene, a stagnant ice sheet overlaid the region, and eroded weathered material at higher elevations, but not affecting the placer deposits in the valleys. Cariboo-Barkerville-Wells district has produced 65% of placer gold in British Columbia. District is divided into three belts, the Barkerville, the Horsefly and the Hixon. The Barkerville belt occurs in the mountainous Quesnel Highland region. Present-day streams follow the same drainages as those that formed the placer deposits. Galloway, 1930; Galloway, 1932; British Columbia Department of Energy, Mines, and Petroleum Resources Bulletin 21, 1963; B.C. Minfile, 1989; BCGSB Bulletin 89, 1993.	Cariboo-Barkerville-Wells Placer Au	Au	Production of 64,859 kg fine Au. Years of Production: 1850-1990. Fineness: 755-920
N10-05 52°34'N 121°30'W Gold was first found on the Horsefly River in 1859, followed by other important discoveries in the Cariboo area in the 1860's. The Quesnel area of the Cariboo District is comprised of large valleys and plateaus that pre-date glaciation. Underlying bedrock is sedimentary and volcanic rocks of the Upper Triassic to Lower Jurassic Nicola and Takla Groups. Metamorphic lode gold deposits, as at Frasersgold, occur in a black phyllite unit. Extensive gravel and gold accumulated in the valleys during Tertiary uplift. The stagnant Pleistocene ice sheet largely protected these deposits, but some reworking occurred during interglacial periods. Post-glacial streams eroded the drift and reworked some of the gold into recent deposits. Ancient stream beds resting on bedrock are the richest and most continuous. The interglacial stream deposits are lower grade but fairly extensive. Modern stream gravels contain small deposits of fine grained gold. Fine platinum is irregularly distributed in black sands along the Quesnel River. Galloway, 1930; Galloway, 1932; British Columbia Department of Energy, Mines, and Petroleum Resources Bulletin 21, 1963; Boyle, 1976; B.C. Minfile, 1989.	Cariboo-Quesnel-Horsefly Placer Au, Pt	Au	Production of 21,565 kg fine Au. Years of Production: 1859-1990. Fineness: 801-902

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N51-01 55°40'N 125°00'E	Verkhnegilyui Placer Au	Au	Production of 5 tonnes Au. Proven reserves of 6 tonnes Au; inferred reserves of 55 tonnes Au; total reserves of 66 tonnes Au.

District is divided into the Apsakan, Laprin, Malogilyui, and Bryantin subdistricts. The district occurs in the axial part of the Stanovoi anticline. Gold-bearing areas within the district occur close to the Mesozoic Tynda, Dyupkoisky, Unakhinsky, and Mulmugin plutons.

Apsakan subdistrict lies in basins at the headwaters of the Verkhny Larba, Nizhny Larba, and Sredny Larba Rivers, and is confined to the northwestern margin of the Tynda pluton, that intrudes Proterozoic granite and Archean metamorphic rocks. The ratio between the number of lode deposits and placer deposits in the Apsakan subdistrict is 3:2. This is the only subdistrict in the Verkhnegilyui district, where the number of lode deposits is greater than the number of placers. More than 25 lode deposits are known, all are associated with the zones of hydrothermally altered metamorphic rocks. Every placer or low-grade placer deposit overlies a lode deposit. The Larba River placer is the largest in the subdistrict. It was discovered in 1929, and was prospected in the 30's and 40's. It includes several small creek placers, with a total length of 21 km. The deposit starts in the middle of Yanvarsky Creek, continues along the valleys of the Khorogochikan Creek (from the mouth of the Yanvarsky Creek to the confluence with the Sredny Larba Creek) and terminates 4 km downstream from the mouth of Gromkachi Spring. Au content is extremely uneven. Native gold occurs in the lowest bed of pebble deposits and in the upper part of underlying eluvium. Terraces have not been studied. Estimated reserves are 2003 kg.

Laprin subdistrict is located in predominantly Late Archean metamorphic rocks between the Mesozoic Tynda and Dyupkoisky plutons. Cretaceous rocks of the Tiptursky volcanic field occur in the northeastern part of the subdistrict. Only a small portion of the subdistrict has been mined. At the beginning of the century, only placers of the Khitrusha, Maksimovka (the basin of the Lapri River) and Bugorikty (the basin of the Mogota River) Rivers were mined. Placer mines are being planned for the Malinovy, Lysovsky, Tsyganka, and Medvezhi Creeks. The largest placer in this subdistrict, the Khitrusha valley-type deposit, occurs in the Khitrushka Creek that is a tributary of the Lapri River. The deposit has been mined from 1928 to 1950, and there is evidence of earlier operations (presumably 1880-1900). About 4 km of the placer deposit has been mined. The placer averages 60 m wide and 3.4 m thick. Gold grade is 297 mg/m³ and fineness of native gold is 900. Inferred reserves are 1200 kg (V.D.Melnikov, written comm., 1990).

Malogilyui subdistrict is related to Cambrian metamorphic rocks between the Dyupkoisky granodiorite pluton and the Mesozoic Unakhinsky granite-granodiorite pluton. Placers of the Malogilyui subdistrict were previously mined in valleys of the Des (Kamenisty), Olongo (Somnitelny, Marmontovsky), and Maly Gilui (Karlovy, Kruglovsky, and Kurnosovsky) Rivers. The total potential of the area is 19 tonnes gold.

Bryantin subdistrict occurs between the Unakhinsky and Mulmugin plutons. Au-Cu-Mo porphyry deposits were identified along with numerous other gold lode deposits. Additional lode gold deposits are associated with zones of hydrothermally altered metamorphic rocks. All known lode deposits have related placers deposits. Total placer potential of the subdistrict is 12 tonnes gold.

V.D. Melnikov, written commun., 1990.

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N51-02 54°53'N 124°15'E	Srednenuykzhinsk Placer Au	Au	Production of 23 tonnes Au. Proven reserves of 25 tonnes Au; inferred reserves of 76 tonnes Au; total reserves of 124 tonnes Au.

Srednenyukzhinsky district consists of three gold-bearing subdistricts - Elgakan, Urkimin, and Dzheltulak.

Elgakan subdistrict is located on the western side of the Nyuksha River. Several small hydrothermal lode gold occurrences are known in this area; including Balykhtakh which is confined to a EW-trending fault bounding the southern edge of the Mesozoic Chilchinsky granitic pluton. Only low-grade gold placer deposits are known.

Urkimin subdistrict is located on the eastern side the Nyuksha River. The Dzheltula and Sredny Larba placer deposits are confined to the Dzheltulak (Burpalin) fault zone which separates PR terrane metamorphic rocks to the north from the Anosov pluton to the south. Placers of the Urkimin subdistrict are extremely high-grade. They include large prospected placers along the Urkima, Onon, Odolgo, and Agin Rivers, presently being mined by dredges, and smaller placers on the Glubokaya, Razdolnaya, Sivagli, and other Rivers, some of which has been mined recently. The largest placer is on the Urkima River. There are over 20 lode gold deposits in the area, related to the zones of hydrothermal alteration of metamorphic rocks. The largest lode deposit is Odolgo. High-grade lode gold deposits occur near the placer of Berikan Creek. The lode deposits were mined in the early century. The Urkimin valley-type placer was discovered in 1913 on the Urkima River, the eastern tributary of the Nyuksha River. The deposit was mined by hand methods from discovery until 1947 when a low-capacity dredge (250 liter) began operation. The total production from 1913 through 1980 is estimated as 810 kg. The placer is 18 km long, average width is 236 m, average thickness is 7.2 m, total volume of gold-bearing gravel is 32 million m³, average gold grade is 225 mg/m³, fineness of native gold is 881, and proven reserves are 7 tonnes. At present, the placer is being mined with dredges.

Dzheltulak subdistrict includes the valleys at the headwaters of the Bolshoi Dzheltulak River and the middle part of the Tynda River; both western tributaries of the Gilyui River. This district has been known for a long time but only placers have been mined, even though the district also contains many lode occurrences. A major fault in the subdistrict, the Dzheltulak shear zone, separates the Getkansky and Kurbatovsky Proterozoic plutons to the north from the Anosov pluton in the south. Intermittant mining has occurred on placers of the Ilich, Baldygli, headwaters of the Bolshoi Dzheltulak, and Burpaly Rivers (these have proven reserves); and on numerous placers of the Tynda River, tributaries of the Burpaly River, and headwaters of the Bolshoi Dzheltulak River. All placers are spatially associated with the Dzheltulak shear zone, a major fault which separates the Getkansky and Kurbatovsky Proterozoic plutons to the north from the Anosov pluton in the south. The largest placer in the Dzheltulak subdistrict is on the Bolshoi Dzheltulak River, which is a southern tributary of the Gilyui River and contains an alluvial valley-type placer which was discovered in the period 1893-96. Approximately 1.3 tonnes gold had been mined by 1959. In 1954-58 the placer reserves were recalculated based on use of a 250-liter capacity dredge, and that dredge started operating in 1980. At the beginning of dredge operations, the placer was 22 km long, 114 m wide, and the gravel deposit 4 m thick. Average content of native gold is 228 mg/m³, proven reserves are 2474 kg, and the fineness of gold is 887. The deposit is now 70% mined out.

V.D. Melnikov and V.V. Ratkin, written commun., 1994.

Significant Placer Districts of Russian Far East, Alaska, and the Canadian Cordillera

District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
N51-03 53°55'N 122°30'E	Verkhneamursk Placer Au	Au	Production of 169 tonnes Au. Proven reserves of 3.5 tonnes Au; inferred reserves of 50 tonnes Au; total of 284 tonnes Au. Grade: Average gold grade is 133 mg/m ³ , ranging from 58 to 237 mg/m ³ in

District consists of the Solov'ev and Urusha-Oldoi subdistricts. The largest placer in the Urusha-Oldoi subdistrict is the Khaikinsky placer, and the largest placer in the Solov'ev subdistrict is the Dzhallinda placer.

The Khaiktin placer deposit occurs in the valley of the Bolshoi Oldoi River, a large tributary on the north side of the Amur River. Placers in the valley of the Khaikty River have been known since the early century. The Konstantinovka and Orogzhan placers were intensely mined. Based on questionable data, over 2000 kg Au was produced from the Khaikta River valley through 1925. The Khaiktin deposit is a valley type and is 28.8 km long. It is located within the flood plain of the Bolshoi Oldoi and Khaikta Rivers. The width of the flood plain ranges from 500 to 1000 m; alluvium thickness is less than 6.4 m. Gold-bearing sediments contain pebbles with sand, gravel, ooze, clay, and boulders. Bedrock consists of gneiss, granite, amphibolite, and diorite with a well-developed weathering crust. Bedrock has a smooth upper surface, with relief of 0.5 to 1.2 m. Gold fineness is very fine (0.25 mm) 6.47%, fine (0.25 - 1.0 mm) - 41.6%, medium (1.0-3.0 mm) - 38.81%, and large (more than 3 mm) - 13.12%. Average fineness is 876. The gold-bearing bed is 0.6 to 3.6 m thick. Nuggets have not been found. Thirty-four percent of the area of the deposit has permafrost. The deposit has been explored by prospect pits and drill holes across an area 400 x 20m. Only a small portion (3.5%) of the placer deposit has been mined.

The Dzhallinda placer deposit is the largest in the Amur Region. Total production exceeds 120 tonnes gold. The deposit has numerous lode sources, including the Kirovka gold-quartz deposit associated with granodiorite intrusions and metamorphic gold occurrences hosted in greenschist. The deposit is over 45 km long, averages 250-300 m wide, and alluvial deposits are 5 m thick. The placer was discovered in 1867 by N.P. Anosov, and was the first economic placer to be mined in the Verkhnee Priamur'e. Deposit was mined by hand methods until 1929 (with production of 39 tonnes Au). Dredges have been used since from then through the present. Gold is occurs throughout the section; maximum grades have been found near the bedrock. The fineness is high, averaging 940.

Placer deposits of the Yankan River are derived from the Kirovka lode deposits. Placer deposits have been known since 1867 and have been mined since 1871. The placers are over 15 km long, average 350 m wide, and have alluvium about 6 m thick. Gold fineness is 930.

The Nagim placer deposit is located in the western part of the Solov'evsky subdistrict, and is a very thick gold-bearing deposit (up to 50 m thick).

E.I. Belousov and V.D. Melnikov, written commun., 1979; B.Y. Grezin and V.S. Borodin, written commun., 1982.

Significant Placer Districts of Russian Far East, Alaska, and the Canadian Cordillera

District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
N51-04 53°30'N 125°30'E	Gonzhinsky (Gonzha) Placer Au	Au	Production of 48.0 tonnes Au. Proven reserves of 8.0 tonnes; inferred resources 66.0 tonnes; total of 122.0 tonnes.

District occurs in the western part of the Burea superterrane. The area is underlain mainly by Precambrian metamorphic rocks. The largest gold-bearing deposits of the district (Pokrovskoe, Pioneer, Borgulikan, Burinda, and Kulikan) are interpreted as being derived from Early Cretaceous volcanic overlap assemblages.

Osezhinsky subdistrict is underlain by Upper Jurassic-Lower Cretaceous clastic trough. The largest placer is in the Bolshoi Burgali River (the Alma-Burgali subdistrict) that has been mined intermittently since 1890, with a total of production of 1.7 tonnes gold. The placer is 9 km long, averages 250 m wide, and the alluvium is 4-5 m thick. Gold-bearing bed occur in the lower part of alluvium and are 1.6 m thick. Gold is fine (0.3-0.4 mm) and poorly rounded. The placer is being mined again after additional exploration.

Tygda-Ulundy gold-bearing subdistrict occurs in a hilly area in the northwestern part of the Cenozoic Amur-Zeiya depression. The area contains wide river valleys with gentle slopes grade into drainage divides. Topographic relief is commonly 20 to 50 m, rarely 100 m, with the highest relief being 340 to 360 m. The Ulunginsky placer is largest in the subdistrict.

The Ulunginsky placer deposit occurs in the valley of the middle part of Bolshoi Ulunga Creek. The first prospect (Pioneer) was discovered in 1911. Mining operations began in 1915 and are occurring. The Aprelsky prospect, containing both just-subsurface and also deep-seated placer material, was discovered in 1937. The stratigraphic section (from top to bottom) consists of: 0-3 m yellow viscous clay and ooze; 3-7 m dark-brown compact ooze; the first gold-bearing bed (5-7 m below the surface); 7-12 m of false bedrock consisting of angular pebbles derived from granodiorite, decomposed to varied-color clay; the second gold-bearing bed (5 to 7 m), consisting of coarse grained gray sand with poorly-rounded quartz pebbles. Granite boulders up to 40 cm occur locally. About 75% of gold is irregular in shape and less than 0.25 mm makes up about 75%. Gold from 0.5 to 2 mm diameter is of tabular shape and very light in color. Proven reserves of the deep-seated placer are 186 kg; inferred reserves are 500 kg. The placer is 10 km long, average thickness of the gold-bearing bed is 1.3 m, and average thickness of the pit layer is up to 20 m. Gold content varies from 641 to 1419 mg/m³. Gold is 0.25 to 2.0 mm in size, with fineness of 800.

V.D. Melnikov and V.V. Ratkin, written commun., 1994.

Significant Placer Districts of Russian Far East, Alaska, and the Canadian Cordillera

District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
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N52-01 54°55'N 131°05'E	Verkhnezeisk Placer Au	Au	Production of 24 tonnes Au. Proven reserves of 6 tonnes Au; inferred reserves 76 tonnes Au; total reserves of 106 tonnes Au.
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District occurs in the eastern part of the Nora-Sukhotin terrane. The Mulmugin, Toksky, and Okonon plutons of Mesozoic age underlie over half of the district; rest of district is underlain by nearly equal amounts of Early Archean metamorphic rock and Precambrian igneous rock. The district consists of the Sugdzhar, Verkhnetok, Kupuri-Maisky, and Arginsky subdistricts.

Sugdzhar subdistrict occurs near the giant Malmugin and Okonon granitoid plutons. Most lode and placer deposits of the Sugdzhar subdistrict occur within the Sivakan-Toksky block of metamorphic rocks. About 20 lode occurrences are known, related to a long, wide (up to 7 km) shear zone cutting zones of schistose rocks and zones of retrograde metamorphic rock containing disseminated sulfides. Gold occurs in small quartz, quartz-pyrite, quartz-epidote and quartz-feldspar veins and veinlets, in altered gabbro-amphibolite, and in gneisses containing quartz-filled fractures. Most commonly, gold has a fineness 720 to 830. Gold grains are angular, intergrown with quartz (up to 2.5 wt. %), and are small (normally less than 1 mm). Lode sources for gold are interpreted as forming during Late Jurassic accretion; lode deposits are confined to the areas of intense schistosity and retrograde metamorphism.

Verkhnetok subdistrict occurs between the Toksky and Okonon granitic plutons. Late Archean metamorphic rocks and mafic granitic rocks predominate. Estimated placer potential of the Verkhnetok subdistrict is 6 tonnes gold.

Kupuri-Maisky placer subdistrict occurs in the eastern the Okonon pluton in the valley of the headwaters of the Kupuri and Maai Udskey Rivers. Archean metamorphic rocks and gabbro-amphibolite predominate, granodiorite and diorite are subordinate.

Neronsky and Dobraya, 1976, V.D. Melnikov, written commun., 1979.

N52-02a 54°40'N 126°40'E	Dambuki - Part A Placer Au	Au	Production of 185 tonnes Au. Proven reserves of 56 tonnes Au; inferred reserves of 88 tonnes Au; total 329 tonnes Au.
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District is well defined. Internal division is difficult because it is highly gold-bearing throughout. Seven tentative subdistricts are distinguished: Mogotak-Talginsky, Ilikan-Unakhinsky, Kokhaniisky, Zolotogorsko-Uspensky, Dzhalta-Uldegitsky, Ugan-Mogotsky, and Zhurbansky. The shallow Khugdersky placer and the deep Petrovsky and Yasnopolyansky placers are described as examples.

The lode sources for the Khugdersky placer deposit are the Zolotaya Gora deposit and retrograde metamorphism Au lode deposits. The deposit is 15.6 km long, averages 189 m wide and 4.0 m thick, and has an average gold grade of 285 mg/m³. Fineness of gold is 940. The bedrock consists of metamorphic rocks (amphibolite, gneiss, gneissic granite, and diaphorite). Loose sediment consists of 41 % pebbles (more than 5 mm), 31 % gravel (1-5 mm), 21 % sand (less than 1.0 mm), and 3 % ooze and clay. Gold is fine and medium in size: 1.2 % is up to 0.2mm, 50.6 % is 0.21-0.63 mm, 7.2 % is 0.64-2.5mm, and 1 % is greater than 2.5 mm. Gold grains are tabular and bright yellow, locally with a reddish tint. More than 8 tonnes of gold has been mined. Nuggets up to 18 kg were recovered. Heavy-mineral concentrates contain scheelite, zircon, rutile, sphene, anatase, ilmenite, monazite, andalusite, kyanite, molybdenite, apatite, epidote, garnet, pyrite, amphibole, and pyroxene.

Anert, 1928; V.D. Melnikov and others, written commun., 1989.

Significant Placer Districts of Russian Far East, Alaska, and the Canadian Cordillera

District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
N52-02b 54°40'N 126°40'E	Dambuki - Part B Placer Au	Au	Production of 185 tonnes Au. Proven reserves of 56 tonnes Au; inferred reserves of 88 tonnes Au; total 329 tonnes Au.

Petrovsky placer deposit occurs in a saddle on the Tukuringra Ridge. The placer was discovered in 1897 and has been mined since 1898. It does not coincide with a modern river system. Major accumulations of unconsolidated Cenozoic sediments occur in a small elongated NS-trending basin. The slopes of the basin are mostly gentle, with well-preserved piedmonts and wide erosional terraces, corresponding to ancient piedmonts with elevations of 700 to 750 m. The floor and slopes of the basin consist mostly of gneiss and amphibolite with Early Archean marble lenses. The basin floor is rather wide (about 500 m, indulated, with local depressions ranging from 5-10 m and 60-100 m wide). Unconsolidated sediments are 60 m thick. Bedrock exhibits a thick weathering crust consisting of a layer 1-3 m thick of angular pebble-sized fragments that occurs almost everywhere at the base of the sequence of gold-bearing gravel. Unconsolidated material is mainly sandy pebble gravel to pebble sand, with beds and lenses of gravelly mud and peat, muddy sand, and compact clay. The largest and most poorly-rounded clasts are concentrated in the deepest part of the basin, its center. There are several gold-bearing beds in the section, although the richest gold deposits are in the lowermost gravel beds and in the bedrock weathering crust. Grains less than 1.0 mm form 82-90 % of the gold of this ancient placer. Some nuggets occur, mostly 2 to 12 kg and rarely up to 100 kg. Fineness of gold is 950-962. An alluvial origin is interpreted for the sediments of the Petrovsky placer. Anert (1928) proposed initially an origin as an eluvium placer that was redeposited virtually in situ. The placer is presently being mined as a small-scale operation, producing 30 to 60 tonnes gold per year. A total of 4-5 tonnes gold have been produced. Proven reserves are 1 tonne Au; inferred reserves are 2-3 tonnes Au.

Yasnaya Polyana placer deposit occurs within the Yasnaya Polyana basin. The upper level of ancient alluvium was mined in the 1920s. The Yasnaya Polyana basin is 14 km long and 0.6-2 km wide. The basin occurs in a fault zone between Early Archean Dambuki and Late Archean Ilikansky blocks. The basin is filled with sand, pebble gravel, and clay. Clasts are well-rounded and consist of granite, gneiss, and quartzite, with less common amphibolite and volcanic rocks (rhyolite, andesite, and dacite). The placer occurs at the thalweg of a northwest-trending paleovalley. Absolute heights (elevations over the sea level) range from 462.7 m at the western part of the deposit to 403.5 m at its eastern part. The gold-bearing beds are predominantly gravel and pebble with larger clasts. Coarse sand makes up 20%, and clay 15%. The thickness of the gold-bearing bed ranges from 1 to 17.6 m, gold grade varies from colors to 17,966 mg/m³. Gold grains are found 0.4-0.8 m into the bedrock. Gold grains are either small (less than 0.1 mm) of irregular dendritic shape, or are larger, tabular, poorly-rounded grains. Scarce intergrowths of gold with other minerals (quartz, pyrite commonly with galena) generally occur as small grains (less than 0.16 mm). Gold is bright yellow, about 15% of grains are light yellow (straw-like color). These grains are rounded, spindle-shaped. The fineness of native gold is 967. The bedrock consists of granite, Early Proterozoic granodiorite and gneiss, and Archean amphibolite.

Anert, 1928; V.D. Melnikov and others, written commun., 1989.

Significant Placer Districts of Russian Far East, Alaska, and the Canadian Cordillera

District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
N52-03 53°50'N 130°00'E	Dzhagdy Placer Au	Au	Production of 20 tonnes Au. Proven reserve of 2 tonnes Au; inferred reserve 51 tonnes Au; total reserves of 73 tonnes.

District is confined to the Tukurigra-Dzhagdi terrane and is subdivided into the elongate, east-west-trending Un'ya-Bomsky subdistrict which contains most of the placer gold deposits, and a group of subdistricts to the south (Verkhnedepsky, Tuksinsky, and Egorsky). Placer and lode deposits clearly restricted to the east-west-trending Un'insky thrust. Streams are rapid and steep, valleys are canyons. Un'ya Creek has the widest flood plain (300-450 m), the valley of the Bom Creek is steep. Valleys of tributaries (rapids) of the Bom Creek are even steeper.

Born Creek placers are largely concentrated in the first flood plain terrace which is 40-45 m high and 400-450 m wide. The deposits are about 5 m thick and gold-bearing throughout the whole length of the creek. Gold distribution is extremely irregular. Gold occurs locally on the floor of the creek and in tiny fractures in the greenschist bedrock. Gold grains are coarse and nuggets up to 400 kg g are found.

Un'ya Creek deposit contains both terrace- and valley-type placers. The valley placer part is 20 to 120 m wide. Valley alluvium is 2.5 to 6.0 m thick. The gold-bearing bed consisting of gravel and pebble near the bedrock is 0.2 to 0.6 m thick. Terrace placers of Un'ya Creek are also mainly related to the first flood plain terrace, which is 15-20 m high. Terrace alluvium ranges from 6 to 25 m thick. Gold distribution is irregular. Gold is coarse and poorly rounded. Quartz fragments in some places contain visible gold and scheelite.

V.D. Melnikov and others, written commun., 1985.

N52-04a 52°50'N 128°50'E	Zeiya-Selemdzha - Part A Placer Au	Au	Production of 111 tonnes Au. Proven reserves of 29 tonnes Au; inferred resources 101 tonnes Au; total 241 of tonnes Au.
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District is underlain by Early Cretaceous volcanic rocks which mostly overlie the Nora-Sukhotin terrane. The district is subdivided into the Umlekan, Yasnensky, Oktyabrsky, Sokhatiny, Chagoyan, and Nizhneselemdzha subdistricts. The Zeiya-Selemdzha placer gold district has the largest gold reserves in the the Amur region.

Umlekan subdistrict covers an area of about 3,000 km² in the valley of the Umlekan and Nemogin Rivers, and in the valley of the Zeiya River from the mouth of the Chalbachi Creek to the mouth of the Bugo Creek. The first discovery was a rich placer on a bar in the Zeiya River near the mouth of the Bugo Creek. The subdistrict occurs in an Early Cretaceous caldera. Numerous lode occurrences are in the subdistrict and consist of quartz veins in hydrothermally altered volcanic rocks and in granodiorite that intrudes Jurassic sandstone. About 20 small placers occur in the subdistrict. Some are exhausted; others were only explored (Umlekan and Algachan Rivers). Gold in placers is of variable size and shape, often in intergrowths with quartz. Fineness is 750-850. The sources for shallow-seated placers of small creeks are gold-bearing, hydrothermally-altered volcanic rocks.

Yasnensky subdistrict occurs in the basin of the Yasny Creek, the adjacent valley of the the Dep River, and the headwaters of the Gar 1 and Gar 2 Rivers. Most placers are occur in Lower Quaternary deposits. More than 25 placers occur in the subdistrict, most are exhausted. Extremely interesting data were obtained from a prospecting trench crossing the valley of the Gar 2 River at the mouth of the Karakatitsa Creek. This trench contains a displaced weathering crust of greenstone rocks, and the 665 nuggets recovered from this trench differ sharply from gold of the placer by having higher fineness values. The lode source is unknown.

V. Lozhnikov and others, written commun., 1984; V.D. Melnikov and others, written commun., 1985.

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
N52-04b 52°50'N 128°50'E	Zeiya-Selemdzha - Part B Placer Au	Au	Production of 111 tonnes Au. Proven reserves of 29 tonnes Au; inferred resources 101 tonnes Au; total 241 of tonnes Au.

The largest placer of the Yasnensky subdistrict is the Yasny Creek placer, discovered in 1934. It was actively mined from 1935 to 1937. More recently the deposit was mined using a dredge and exhausted. The bedrock consists of crushed extrusive rocks, with less common sandstone and siltstone. Gold-bearing gravel directly overlies bedrock. Gold distribution is uneven. Gold content decreases sharply to colors as distance above bedrock increases. Gold grain shapes are irregular and rounded. Intergrowths with quartz or quartz and tourmaline are common. Gold fineness is 900, gold grains are coarse (2-4 mm), and nuggets of 30-60 g are common. Nuggets locally reach 100 g. The gold-bearing bed is overlain by gold-bearing ooze and clay (0.5-4.0 m), and less common sandy-clay deposits 0.3-1.7 m thick. The section is covered by a bed of soil 0.3-0.5 m thick.

Oktyabrsky subdistrict covers the valley of the Dzheltulak River and the headwaters of Inkan, Elna, and Bolshoy Kalakhta Creeks. Gold was discovered in 1937 in the Dzheltulak 1 and Dzheltulak 2 Rivers, and in a very rich placer in Sandunovsky Creek, a tributary of the Dzheltulak 1 River. Numerous placers were later discovered and prospected within the subdistrict, which are still being mined using dredges. The subdistrict is underlain mainly by Early Paleozoic granite with fragments of Late Proterozoic to Early Cambrian schist and marble, Silurian conglomerate, sandstone, siltstone, and Devonian clastic carbonate rocks. Numerous lode gold occurrences are in quartz-carbonate and calcedony veins. Small gold-bearing skarn bodies in limestone are less common. Most gold placers are related to Late to Middle Quaternary sediments. Almost all placers are alluvial, either valley or terrace, locally mixed. Eluvium and talus placers such as Nagornaya and Morennaya are uncommon. Modern and ancient placers are located separately: modern ones occur below the talweg of the valley (or close to it) at a depth of 3-6 m. Old placers are not related to the modern valley floor and much deeper (5 to 15 m). Locally old and modern placers occur one above the other and are separated by a layer of barren sediment. In some valleys, old placers are eroded either completely or partly, forming modern placers. The bedrock is generally heavily weathered granite, now angular pebbles and clay. The gold-bearing bed of old placers consists of heavily eroded pebbles with clay patches of different shades and pebbly sandy-clay deposits. Gold generally occurs in the middle part of beds. Native gold fineness is commonly high, up to 950. Large nuggets up to 500 grams were found locally (eg: headwaters of the Kalakhta River). Gold in placers is associated with scheelite, cinnabar, and less common galena. Modern placers have lower gold grade. They are confined to the flood valley alluvium and consist of clay, ooze, and sand with pebbles. Native gold fineness in modern alluvium placers (up to 885) is locally significantly lower than in older placers. The lower fineness results is because these placers were derived directly from lode sources, rather than from erosion and reconcentration of old placers.

V. Lozhnikov and others, written commun., 1984; V.D. Melnikov and others, written commun., 1985.

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
N52-04c 52°50'N 128°50'E	Zeiya-Selemdzha - Part C Placer Au	Au	Production of 111 tonnes Au. Proven reserves of 29 tonnes Au; inferred resources 101 tonnes Au; total 241 of tonnes Au.

Sokhatiny gold-bearing subdistrict covers the valley of the Sokhatiny River and headwaters of the Mamyn River (Orlovka, Levy and Pravy Mamyn Creeks). The placers of the Sokhatiny River were discovered in 1942, and have been mined from 1948 through the present time. Bedrock consists of Early Paleozoic granitic rocks cutting Proterozoic to Cambrian deposits, as well as small Early Cretaceous intrusions and numerous dikes. Only three lode occurrences are known in the subdistrict, consisting of quartz-tourmaline breccia zones with sulfides and altered quartz-sericite rocks. About 30 placers have been discovered; many of them are mined out. The valley of the Adamikha River is being explored.

Chagoyan gold-bearing subdistrict is located in the southern part of the NS terrane and covers the valley of the Zeyia River from the mouth of the Tygad River to the mouth of the Gramatukha River, including all tributaries. Placers here have been mined since 1893. Lode gold occurrences (seen in talus) in the valley of the Malyutka River contain fragments of veined quartz with visible gold. A prospecting drill hole on the Chagoyan polymetallic deposit revealed high gold grades at depths of 29-32 m. Gold placers within the Chagoyan subdistrict occur either in bars or the river bottom. Gold is coarse and of different shapes. In the headwaters of Maly Chukan and Chagoyan Creeks, nuggets up to 140 g occur as intergrowths with quartz. Native gold fineness is 675-911.

Nizheselemdzha (Maisy) gold-bearing subdistrict covers the areas near the mouths of the Orlovka, Selemdzha, and Aldikon Rivers. Most placers occur in the valley of the Neklya River. Placer mining began here in 1895 and continues today. Bedrock consists of crystalline metamorphic rocks, including Silurian schist cut by large Early Paleozoic granitoid intrusions. The largest placer in the subdistrict is on the Neklya River, consisting of shallow and deep-seated gold-bearing beds. This placer has been mined since 1902, producing a total of 9.5 tonnes gold. This placer occurs between two granitic stocks (the Tatarkinsky in the north and Ust-Orlovsky in the south) but is confined to the area of Early Paleozoic schist between them. An economic placer 15 km long and averaging 140 m wide occurs in the headwaters and middle part of the Neklya River valley. In the upper part of this deposit the first gold-bearing layer is 1.5 m thick and 6-8 m below the surface; splitting into two beds downstream with a bed of gold-free alluvium 10-12 m thick between them. The beds coincide in plan view. A paleoplacer plunges to the south, and has been explored to a depth of 24 m. Gold-bearing deposits consist of quartz pebble and cobble gravel with a compact clay matrix. Average gold grade in deposits being mined at present is 115 mg/m³; fineness of native gold is 900. Gold is fine, average size is 0.64 mm. Most gold in placers is dense, but several dendritic grains were observed. Unlike the lower bed, the upper one has smaller gold grains and they are poorly rounded. Poorly-rounded nuggets intergrown with quartz also occur. Fragments of veined quartz found in headwaters of the Neklya River, contain up to 2.4 g/tonne gold. The placer is presently being mined by a dredge.

V. Lozhnikov and others, written commun., 1984; V.D. Melnikov and others, written commun., 1985.

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
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N53-01 53°00'N 132°45'E	Verkhneselemdzha Placer Au	Au	Production of 137.0 tonnes Au. Proven reserves of 29.0 tonnes Au; inferred reserves of 60.0 tonnes Au; total reserves of 226.0 tonnes Au.
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District is the best known placer district in the Amur region and includes the Kharga, Malomyrsky, Verkhnestoibinsky, and Tokur-sagursky subdistricts. Total inferred reserves for the district are 226 tonnes gold; which is 13.7% of the total reserves of the Amur region. The majority of mined lode gold deposits are also concentrated in this district (Zazubinsky, Poiskovoe, Sagur, Afanas'evsky, Kharga, Unglichikan, and Yasnoe). The only lode deposit in Amur which is currently being mined. The Tokur deposit also occurs here. Most lode gold deposits in the Verkhneselemdzha district occur in metamorphic rocks. The district includes large placers that can be mined by dredge (Selemdzha River, Verkhny and Nizhny Stoiba, Kharga, Maly Naergen, Elga, Semertak, Ugokhan, and Bolshoi and Maly Karaurak deposits). Placer mining began here in 1972 and continues.

Malomyrsky subdistrict is small, but gold grades are high. It also includes the medium-sized Malomyr lode deposit. The largest placer occurs on the Nizhny Stoiba River.

Verkhne-Stoibinsky placer subdistrict includes two small lode gold deposits (Pokrovka and Voroshilovka) and large placers in the valley of the Verkhny Stoiba River. Gold is mainly concentrated near granitoid intrusions and lode sources.

Tokur-Sagursky subdistrict includes several deposits. The Tokur lode deposit and several rich placers in the headwaters of the Bolshoi Karaurak and Tarnakh Rivers occur in the northern part of the subdistrict. Numerous small lode occurrences in greenschist facies metamorphic rocks and small placer deposits occur in the middle part of the Bolshoi and Maly Karaurak Rivers. Some placer deposits occur within the Sagur dome-like structure. The largest placer at Koboldinsky occurs in the Koboldinsky part of the Selemdzha River between the Ogodzha and Maly Karaurak Rivers. The Sagursky lode deposit occurs to the east; bedrock near this deposit contains numerous metamorphic gold occurrences. To the west of the placer are very promising lode gold deposits (Pridorozhnoe, Mostovoe, and others).

Kharga subdistrict contains six small Au and Au-W lode deposits and one Au-Sb lode deposit. Three placer gold-bearing areas are distinguished and are confined to metamorphic domes and outcrops of small intrusions. The Kharga placer is the largest in the subdistrict and produced over 20 tonnes Au was produced from valley part of the deposit. This deposit has several lode sources. The richest part of the placer occurs close to the Kharga lode deposit. Numerous metamorphic gold occurrences with high gold grades occur the placer. The upper part of the Kharga Creek valley was recently explored. The richest part of the placer occurs immediately adjacent to the Talyminsky Au-Sb lode deposit.

V.D. Melnikov and others, written commun., 1985 ; V.D. Melnikov & V.D. Polevanov, written commun., 1990.

N53-02 52°14'N 133°53'E	Sofiiskoe Placer Au	Au	Size: Medium. Deposits are exhausted. Fineness: 750-800
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District occurs in stream deposits in the upper reaches of the Niman River (a tributary of the Burea River). Total length of placers is approximately 30 km. Fine- and medium-grained gold is distributed irregularly. Gold fineness is 750-800. Gold is derived from greenschist facies rocks of the Sofiisky metamorphic dome that contain streaks, veins, and lenses of ore-bearing quartz. Gold-bearing tributaries drain small veinlet deposits. Placer deposits are exhausted.

N.V. Ognyanov, this study.

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
N53-03 52°24'N 135°44'E District occurs in the valley of the Kerbi River and its numerous tributaries. Total length of gold-bearing beds is approximately 35 km. Gold is fine- and medium-sized with fineness of 800-850. Bedrock is Jurassic black shale that is metamorphosed to greenschist facies and that contains thin scattered streaks of gold-bearing quartz. N.V. Ognyanov, this study.	Kerbi Placer Au	Au	Size: Small. Fineness: 800-850
N54-01 53°52'N 139°49'E District contains stream and bench placers of the UI Orelsky River and tributaries. Total length of placers along the UI Orelsky River and its tributaries is approximately 15 km. Gold is associated with vein quartz. Fineness of 850-900. Local bedrock consists of Early Cretaceous siltstone, sandstone, and late Cretaceous volcanic rocks. Deposit derived from the Mnogovershinnoe lode gold deposit. N.V. Ognyanov, this study.	Ulskoe Placer Au	Au	Size: Small. Fineness: 850-900
N54-02 53°35'N 140°21'E District contains low-grade stream placers that occur along the Kolchan River and its tributaries with a total length of approximately 10 km. Gold is fine-grained; fineness of 500 to 600. A few nuggets occur, ranging up to 10-20 g. Gold is associated with quartz and adularia. Local bedrock consists of volcanic rocks and hydrothermally altered siliceous rock. Placer deposits are derived mainly from the Belogorsk lode deposit that consists of late Paleogene gold-bearing altered siliceous rocks with quartz-adularia alteration. N.V. Ognyanov, this study.	Kolchanskoe Placer Au	Au	Size: Small. Deposits are exhausted. Fineness: 500-600
N54-03 53°02'N 138°46'E District contains stream deposits along the Kherpuchi River and tributaries of the Somni spring (a tributary of the Amgun River). Placer deposits occur both in main and branch valleys along a distance of over 25 km. Gold is fine- or medium-sized, and high-grade. Vein quartz occurs in the gold-bearing sand. Gold is derived from small quartz veins and veinlets that contain gold and arsenic sulfides. Local bedrock consists of Early Cretaceous sandstone and siltstone. N.V. Ognyanov, this study.	Kherpuchinskoe Placer Au	Au	Size: Medium. Fineness: 700-850
N54-04 52°37'N 139°29'E District contains alluvial-colluvial placers that occur in the valley and on slopes of the Pochel River (a tributary of the Amgun' River). Gold is concentrated largely in a weathering crust developed in a gold-bearing, mid-Cretaceous tonalite that contains quartz streaks with As and Pb sulfides. Rock-forming minerals from the tonalite and veined quartz are abundant in gold-bearing sands. Gold is fine and medium size. N.V. Ognyanov, this study.	Oktyabrskoe Placer Au	Au	Size: Small. Fineness: 800-850

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
N54-05 54°06'N 142°55'E District contains small placers, 30 to 10 m wide and up to 1000 m long. Gold occurs throughout the 3 to 4 m thick section of modern alluvium, although a 1.2 to 1.4 m thick zone near bedrock is the richest. Alluvium consists of ultramafic and mafic rocks that are altered to chlorite, zeolite, and albite. Heavy-mineral concentrates contain chromite, magnetite, pyrite, and siderite. Gold grains are normally larger than 0.5 mm. Some gold forms intergrowths with albite and magnetite. The bedrock source of the placer deposits is gold-bearing zeolite-epidote-prehnite-chlorite and albite-pyrite-chlorite rocks that occur at the contact with serpentinized ultramafic rocks and propylitic altered gabbro. Source rocks contain up to 2 g/t Au. V.D. Sidorenko, 1977.	Schmidtovskoe Placer Au	Au	Size: Small. Fineness: 800-900
N57-01 54°57'N 159°42'E District consists of a shallow alluvial placer, up to 1200 m long and 20 m wide. Gold is coarse-grained; 40% is 3-5 mm in diameter, 30% is 1-3 mm. Heavy-mineral fraction contains magnetite, cinnabar, scheelite, chromite, ilmenite, and gold. Bedrock consists of hydrothermally altered tuff and tuff breccia, with veinlets and masses of quartz containing 0.4 g/t gold and up to 7.4 g/t silver. A.V. Sytov, written commun., 1980.	Temny Creek Placer Au	Au	Estimated original 59 kg Au. Probably exhausted. Grade: Estimated 0.8 g/t.
N57-02 53°49'N 159°48'E Consists of a modern beach placer, about 17 km long and 30 to 80 m wide. Heavy mineral fraction, including magnetite, in the placer sand ranges from 0.5 to 1.5%. A.V. Kurkin, written commun., 1964.	Kronotsky Bay Placer magnetite	Ti, Fe	Estimated reserves of 18.8 million tonnes of titanomagnetite concentrate. Grade: No data.
N57-03 53°43'N 158°34'E Consists of shallow placer deposits that occur in a flood plain and flood plain terrace in an area about 3000 m long and 20 m wide. Forty percent of gold grains range 0.1 to 0.5 mm. Heavy minerals are magnetite and pyrite. Bedrock consists of pyritized, kaolinized, silicified Miocene tuff with up to 0.5 g/t Au and 10-70 g/t Ag. S.S. Koval, written commun., 1966.	Udachny Creek Placer Au	Au	Size: Small. Estimated production of 162 kg gold. Probably exhausted. Grade: Estimated average of 0.7 g/cu m Au.
N57-04 53°26'N 157°44'E Consists of a buried alluvial placer about 2700 m long and up to 50 m wide. Gold grains range from 3 to 5 mm (45%) and 0.5 to 1 mm (48%). Heavy minerals are magnetite, scheelite, and platinum (few grains). Non-rounded gold grains occur in alluvium. Bedrock consists of pyritized and silicified tuffs containing 0.3-0.5 g/t gold and up to 70 g/t silver. Bedrock is brecciated and fractured along contacts with lamprophyre dikes. S.S. Koval, written commun., 1973.	Iudumich Creek Placer Au	Au	Size: Small. Resources of 543 kg Au. Proven reserve of 61 kg Au.. Grade: Ranges from 3 to 22 g/cu m Au.

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
N57-05 53°21'N 158°17'E Consists of a buried alluvial placer. Fifty percent of gold grains are larger than 5 mm, 30% range from 3 to 5 mm. Heavy minerals are magnetite, zircon, garnet, rutile, sphene, ilmenite, apatite, leucoxene, chromite; with rare platinum. Gold derived from thin quartz veins and fracture zones in Miocene quartz diorite that exhibits a gold content up to 5 g/t, and quartz-rich zones in metamorphosed Proterozoic shale. A.P. Sharga, written commun., 1965.	Kamenisty Creek Placer Au	Au	Production of 8 kg Au. Deposit exhausted. Grade: Up to 2.26 g/m ³ .
N57-06 53°12'N 159°15'E Consists of titanomagnetite sand that occur in a typical beach placer 500 to 5000 m wide with an economic ore-bearing zone 2 to 10 m thick. Ore minerals are magnetite, titanomagnetite, martite, and ilmenite. Sand contains 11.8 to 14.5% total Fe, 1.42 to 1.77% TiO ₂ , and 0.06 to 0.11% V ₂ O ₅ . Concentrate produced by hydraulic and magnetic separation contains 58.1% Fe, 9.72% Ti, 0.46% V ₂ O ₅ , 0.01% sulfur, and 0.032% phosphorus. Iron ore is low-grade. M.F. Kobylykin, written commun., 1964.	Khalaktyrskoe Placer magnetite	Ti, Fe	Estimated tonnage of concentrate is 5,998,100 tonnes; estimated resource of 2,310,000 tonnes Fe and 390,000 tonnes TiO ₂ in 6,000,000 tonnes concentrate.
N57-07 53°03'N 157°07'E Consists of shallow, valley placers that occur in a flood plain and on terraces. Placers occur as discontinuous layers up to 8 km long and 60-360 m wide. Gold is fine-grained; 60% ranges from 0.1 to 0.5 mm. Gold is derived from thick (up to 400 m) veinlet zones that contain up to 65.4 g/t gold. Heavy minerals are ilmenite, magnetite, zircon, epidote, and scheelite. Placers are partly mined. V.I. Shaposhnikov, written commun., 1969.	Kameshkovo-Polovinchik River Placer Au	Au	Production of 25 kg Au. Grade: Average Au 0.5 g/m ³ .
N57-08 52°50'N 156°59'E Consists of a group of shallow alluvial placers that are over 8 km long and up to 80 m wide. Placers occur both in flood plains and on terraces. Heavy minerals are magnetite and ilmenite. Gold is fine- and medium-grained. Interpreted source of gold are fracture and mylonite zones in Late Cretaceous sandstone and siltstone that contains up to 0.1 g/t Au and up to 2 g/t Ag. M.M. Zadornov, written commun., 1968.	Goltsovka Placer Au	Au	Production of 86 kg Au. Grade: 0.4 to 0.5 g/m ³ .

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
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O04-01 59°00'N 161°10'W	Goodnews Bay, Bethel Placer PGE-Au	Pt, Au Cr	Production of over 20,200 kg PGE and 2,259 kg Au. Years of Production: 1900-1995. Fineness: 854-893
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Most extensive platinum placer deposits are in the Salmon River drainage; smaller productive placers also occur in Wattamuse, Fox, Butte, and Kowkow Creeks and in Snow Gulch; all northwest of Goodnews Bay. This latter area is sometimes referred to as the Bethel district. Platinum and gold mined mainly by bucketline dredges. Production mainly from 1934 to 1982, a major portion of the primary U.S. platinum production. Average percentages in placer concentrates are 73.6% Pt, 9.9% Ir, 1.9% Os, 0.15% Rh, 1.2% Ru, 0.34% Pd, 2.1% Au, and 10.9% impurities. In Salmon River drainage, Pt, Cr, and some Au, are apparently derived from the nearby informally named Middle Jurassic Goodnews Bay ultramafic complex of Southworth and Foley (1986), composed of dunite, pyroxenite, and hornblende, with anomalous PGE concentrations associated with sparse chromite segregations. In both areas preglacial ancestral channels and reworked till forms main placer deposits. Gold in Wattamuse, Fox, Butte, and Kowkow Creeks (Bethel district) probably derived from monzonite plutons. Magnetic surveys indicate possible 5-km offshore extension of the Goodnews Bay complex. Fineness values range from 854 to 893 for Wattamuse, Butte, Fox, and Kowkow Creeks.

Mertie, 1940, 1969; 1976; Berryhill, 1963; Cobb, 1973; Southworth and Foley, 1986; Barker and Lamal, 1989; Zelenka, 1988; Bundtzen and others, 1996.

O05-01 57°45'N 153°30'W	Kodiak Placer Au	Au, Ag, Cr, Pt	Production of 149 kg Au. Years of Production: 1895-1920, intermittently. Fineness: average 837
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Gold concentrated in beach deposits and in sand dunes that are derived from glacial outwash and tills. Pre-glacial placers removed during Pleistocene glaciation. Heavy minerals include magnetite, pyrite, chromite, and platinum. Gold fineness averages 837 from eight analyses of strandline deposits. Gold probably derived from Au-bearing quartz vein deposits in graywacke and argillite of the Upper Cretaceous Kodiak Formation. Platinum probably derived from the Jurassic or older, informally named, Border Ranges ultramafic and mafic complex of Burns (1985). Local bedrock is Late Cretaceous graywacke, granitic plutons, and Tertiary sandstone.

Capps, 1937; Cobb, 1973

O07-01 59°00'N 138°00'W	Yakutat (Lituya Bay) Placer Au-Ti	Au Ag, Pt, Fe, Ti, garnet	Production of 135 kg Au.. Years of Production: 1894-1989. Grade: Estimated 4.6 million m3 grading 10.0% ilmenite.
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Consists of discontinuous strandline deposits of placer gold, ilmenite, and other heavy minerals are found along 450 km of coastal plain from Cape Spencer northwest to Point Manby on Yakutat Bay. Ilmenite rich strandline deposits are concentrated between Dixon Harbor to Cape Fairweather, where beach sands contain from 5 to 40% heavy minerals including garnet, pyroxene, ilmenite, magnetite, rutile, sphene, and zircon. Titanium content in ilmenite ranges from 48 to 53% TiO₂. Trace platinum group metals have been recovered during placer mine activities. Much of the heavy mineral component on strandlines is believed to be derived from Laparouse layered gabbro-ultramafic intrusion in the Fairweather Range. Glaciers and rivers brought heavy minerals to the coast, where they were concentrated along the beachline by longshore drift and other coastal erosional processes. Estimated indicated reserves at Yakutat are 57 million tonnes averaging 3.23% ilmenite, 0.11% rutile, 0.05% zircon, and unknown but significant gold content. Indicated reserves from Situk River to Boussole Bay are 192 million tonnes of 2.40% ilmenite and rutile combined. Fine platinum and ilmenite occur in low concentrations.

Tarr and Butler, 1909; Mertie, 1933; Rossman, 1957; Thomas and Berryhill, 1962; Thomas and Berryhill, 1962; Brew and others, 1978; Foley and others, 1995.

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
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O08-01 59°20'N 136°08'W	Porcupine-Haines Placer Au	Au Ag, V, Ti, Magnetite	Production of 2,525 kg Au. Years of Production: 1898-1994. Fineness: 669-902; averages 837
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Deposits occur in modern streams incised into bedrock, as ancestral channels elevated above modern floodplains, in alluvial fans, and in glacial till. Distribution (dispersal) of heavy mineral placer deposits greatly influenced by Late Pleistocene to recent glaciation. Heavy minerals include magnetite, ilmenite, pyrite, sphalerite, scheelite, zircon, and trace cassiterite. Gold fineness ranges from 669- 902 and averages 837. Principal producing streams include Porcupine, Glacier, McKinley, Nugget, Summit, Cahoon, Christmas, and Cottonwood Creeks; over 90% of total production was derived from Porcupine Creek and its tributaries. Large, low grade placer gold resources exist in Nugget and Porcupine Creek alluvial fans; smaller, high grade, modern stream placers have been largely mined out. Gold interpreted as being derived from quartz-carbonate-sulphide-gold veins and vein swarms that intrude Paleozoic slate near the head of auriferous stream drainages. Erosion of Klukwan mafic-ultramafic intrusions has produced an alluvial fan deposit containing 980 million tonnes averaging about 10.8% Fe₂O₃, 1.7% TiO₂, and 0.3% vanadium.

Eakin, 1919; Beatty, 1937; Wright, 1940; Berg, 1984; Bundtzen, 1986; Bundtzen and Clautice, 1986; Hoekzema and others, 1989; Still and others, 1991.

O08-02 59°35'N 133°32'W	Atlin Camp Placer Au	Au	Production of 15,448 kg fine Au. Years of Production: 1898-1990. Fineness: 774-842
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District consists of placers in weathered Tertiary and pre-Wisconsinian interglacial deposits, and post-glacial gravels. Gold occurs in alluvial valley fill and terraces. Some placers are capped by Tertiary and Pleistocene basalts. Gold is generally coarse-grained. Mesothermal gold-quartz-sulphide veins occur in the vicinity of placers, but are generally sub-economic. The high grade portions may have been eroded off to form the placers. Veins are hosted by greenstone, argillite, and serpentinite of the Cache Creek Group. Gold was discovered in the Atlin Camp in 1898. District underlain by sedimentary, volcanic, and intrusive rocks of Paleozoic to Pleistocene age. The oldest rocks are the serpentinitized ultramafic rocks of the Upper Paleozoic Cache Creek Group.

Galloway, 1930; Aitken, 1959; Boyle, 1976; B.C. Minfile, 1988; Morison, 1989.

O08-03 58°18'N 134°22'W	Juneau-Admiralty Placer Au	Au Ag	Production of 2,188 kg Au. Years of Production: 1880-1993. Fineness: 772-827
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Placer deposits occur in modern streams, semi-residual ancestral benches, and strandline deposits on Douglas and Admiralty Islands and on the mainland of Juneau Gold Belt. Principal deposits occur mainly in Gold Creek and in Silver Bow Basin near Juneau; others include Middle Basin, Little Basin, Mist Creek, Montana Creek, McGinnis Creek, Nugget Creek, Last Chance Basin, and Boulder Creek. Much of the production or about 1,060 kg gold (48% of the total) was derived from Gold Creek and Silver Bow Basin. Gold in Silver Bow Basin is found directly over the auriferous Alaska-Juneau sheeted vein system, and some production consisted of high grade gold in quartz boulders that was later crushed in local hardrock mills. Gold was also recovered from tailings disposed from Alaska-Juneau and Treadwell mine complexes. Gold has been located in submarine placer strandlines near the mouth of Gold Creek, but the deposit has never been mined. Placer paystreaks are found discontinuously in steep stream gradients. Large glacial boulders have posed a significant recovery problem throughout the Juneau-Admiralty districts. Gold fineness ranges from 772 to 827, similar to fineness in nearby mesothermal, low sulfide, gold-quartz deposits. Principal heavy minerals are arsenopyrite, galena, and sphalerite.

Smith, 1941; Spencer, 1906; Cobb, 1973; Redman and others, 1989; Bundtzen and others, 1994.

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
O09-01 58°40'N 130°10'W Main placer gold production from pre-glacial sediments in drainages transverse to the northwest glacial direction. Gold derived from Au quartz veins that occur in greenstones and metasedimentary rocks of Mississippian to Permian Sylvester allochthon of Slide Mountain terrane. Early Cretaceous granitoids of the Cassiar Batholith are associated with gold veins. Stringers occur mainly in the sedimentary rocks, some occur in intrusives. Erosion and concentration of gold in river channels occurred during the Tertiary. Gold was reworked but not dispersed during two later glacial events. Color and fineness of the gold varies widely from creek to creek indicating different sources. Gold from Boulder Creek is coarse and in the form of nuggets, with quartz adhering to it, suggesting that the source is proximal. Holland, 1940; Gabrielse, 1963; B.C. Minfile, 1988.	Cassiar Camp Placer Au	Au	Production of 6989 kg fine Au. Years of Production: 1874-1990. Fineness: 759-894
O09-02 57°44'N 131°46'W Gold was initially found in Stikine River-Telegraph Creek district on the Stikine River 1861. River drains volcanic and sedimentary rocks of the Stuhini Group that is intruded by Jura-Cretaceous granitoid rocks. Gold interpreted as derived from post-Pleistocene erosion of Coast Mountains. Most placer gold has been recovered from near bedrock surface; some flour gold is recovered from Stikine River bars. British Columbia Department of Energy, Mines, and Petroleum Resources Bulletin 21, 1963; B.C. Minfile, 1988.	Stikine River-Telegraph Creek Placer Au	Au	Production of 171 kg fine Au. Years of Production: 1861-1990. Fineness: 849-855
O51-01 56°28'N 122°01'E District is the largest in the Far East Russia and occurs to the north of the Mesozoic Chilchinsky granitic pluton that intrudes Early and Late Archean metamorphic rocks. Granitic rocks are anorthosite (Kalar pluton), syenite (Tassky pluton), and granite (Sedolchinsky and Cheremkhalaksky plutons). In the northern part of the district, zones of retrograde metamorphism occur along the Stanovoi and Yuzhnoaldan regional faults that occur between the Aldan shield (the Siberian Craton) and Nora-Sukhotin terrane. Only a few placers occur in this area. The total potential (mined + proven reserves + inferred reserves) comprises 2% of the total potential of the Amur Region. Darynmakitsky placer deposit, the best studied deposit in the Nizhneyukzhinsky district, was discovered in 1929 and was mined during the 1930s. Gold occurs for a distance of 10 km. The placer averages 60 m wide, alluvium ranges from 4 to 6 m thick, and gold-bearing gravel occurs in the lower 2 m of the alluvium. Average grade is 450 mg/m ³ Au. The richest part of the placer occurs near bedrock and consists of eluvium, with gold-bearing sand filling the fractures. Source sources for the placer are presumably quartz veins and zones of cataclastic and weakly altered to sulfide-bearing rocks, both closely related to the Stanovoi fault zone. V.D. Melnikov, written commun., 1979.	Nizhnenyukzinsky district Placer Au	Au	Inferred reserves 35 tonnes Au.
O53-01 58°37'N 137°11'E Consists of a buried placer that is 5 km long and 0.2-0.4 km wide. Depth of overburden ranges from 5-30 m. Gold-bearing bed is 0.2 m thick, grade is 3.2-4.5 g/m ³ . Interpreted as derives from the Malyutka gold-quartz deposit. The placer district includes several small deposits. P.P. Smirnov, written commun., 1961; N.L. Kobtseva, written commun., 1988.	Kurun-Uryakh Placer Au	Au	Production of about 12 t Au. Grade: 3.2-4.5 g/cu m Au.

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
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O53-02 57°36'N 134°38'E	Kondeur Placer PGE	PGE Au	Size: Major. Production of 3 metric tonnes PGE in 1993. Second largest placer PGE producer in Russia. Years of Production: Mining since about 1988.
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Consists of an alluvial placer that occurs in the north-flowing Kondeur River valley. Richest placer occurs in a 10 km-long paystreak that averages 100 m wide. Placer platinum occurs in 6-8 m thick fluvial gravels on or just above bedrock. Typical platinum grains range from 0.5 mm to 1 cm in diameter. A 4.3 kg iso-ferro-platinum nugget was recovered recently. Iso-ferro-platinum is commonly combined with chromite. Small inclusions of iridium-osmium minerals occur in larger platinum nuggets. Gold comprises 10% of total production (by weight) and occurs in cubic crystalline form with individual cubes up to 1 cm across. Gold contains up to 40% copper and up to 10% palladium. The deposit was discovered in the 1970's. Minor production occurred in early years from small, high-grade placer pockets. All present production is from placers near the head of the drainage. Kondeur placer deposits are derived from lode deposits in the Kondeur zoned mafic-ultramafic complex.

V. Molchanov and V. Sapin, written commun., 1993.

O54-01 59°44'N 143°27'E	Okhotsk Placer Au	Au	Production of about 15 tons Au before 1930. Most deposits exhausted. Grade: 3-47 g/m ³ . Fineness: 720-850
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District was discovered in 1829 covers an area of about 140 sq. km. Aabout ten placer deposits occur in the district; nearly all are exhausted; a few are mined at the present. Placer deposits occur in valleys; some are buried. Gold-bearing beds range from 0.12 to 14 m thick and up to 2,000 m long. Gold nuggets to 1 kg were found. Bedrock sources for placer deposits are unknown. Example deposits occur at Zolotoi Creek and Raasvet Creek/Gusinka Creek.

Zolotoi Creek placer deposit is buried placer that is 2.9 km long and averages 54 m wide. Depth of overburden is 17 m. Two placer beds occur. The lower bed is 1.8 m thick and directly overlies a weathered crust developed from Cretaceous rhyolite. The upper placer bed is 2.4-5.4 m thick and overlies a clay false bedrock. Gold grade ranges from 2.9-9 g/m³. Gold is mostly fine-grained, with an average size of 0.4 mm. Gold fineness is 717-770. Gold nuggets are scarce but nuggets up to 129 g have been recovered. Bedrock sources are unknown. Gold production was about 2 tons.

Raasvet Creek and Gusinka Creek placer deposits are 600 m long and range from 30-100 m wide. The gold-bearing bed is 0.2-1.8 m thick, with about 4 to 10 m of overburden. Gold grade is 1.5-42.7 g/m³. Gold is coarse-grained. One gold nugget with minor quartz, weighing nearly 1 kg, was found. Gold fineness is 820-850. Bedrock sources are unknown. Production of 233 kg gold.

P.P. Smirnov, written commun., 1962; N.L. Kobtseva, written commun., 1988.

O58-01 59°16'N 163°08'E	Ossora Bay Placer magnetite	Ti, Fe	No Data.
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District occurs in an elongate Ossorsky Bar about 0.5 to 1 km wide extending 15-16 km along the shore of Ossora Bay. Several beds of almost pure magnetite (90% by visual estimate) occur in the tidal zone within marine deposits. The magnetite beds range from 0.03 to 0.3 m thick and pinch out laterally. A beach sand layer about 1.4 m thick has a magnetite content of 27.1%.

V.N., Popov, written commun., 1981.

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
P04-01 63°30'N 156°30'W	Innoko Placer Au	Au, Ag, Hg, Pt, Sn, W	Production of 21,965 kg Au. Years of Production: 1906-1995. Fineness: 825-910; average of about 870
<p>Bulk of gold from Innoko district placers occurs on bedrock benches on easterly or northerly hill slopes. Minor platinum and about 1% of gold content recovered from Boob Creek. Some dredging. Major heavy minerals are chromite, scheelite, and arsenopyrite. Most of district not glaciated. Gold derived from mineralized rhyolite and basalt dike swarms and small monzonite plutons intruding the Kuskokwim Group in the Yankee Creek, Ophir Creek, and Spruce Creek areas. Largest dike swarm located along Ganes-Yankee Creek fault zone which parallels Iditarod Nixon Fault. Placer gold in Colorado, Cripple, and Bear Creeks derived from both granite porphyry and monzonite. Local bedrock also includes Cretaceous metasedimentary and metavolcanic rocks, chert, basalt, and felsic dikes.</p> <p>Harrington, 1919; Mertie, 1936; Cobb, 1973; Bundtzen and Laird, 1980; Bundtzen and others, 1985, 1987, 1996.</p>			
P04-02 61°55'N 161°30'W	Marshall Placer Au	Au, Ag, Pt Ag, W, Hg	Production of 3,863 kg Au. Years of Production: 1913-1995. Fineness: average 802
<p>District contains productive placers on Willow, Montezuma, Elephant, and Wilson Creeks near Marshall, and Kako Creeks and Flat Creek near Russian Mission. Area not glaciated. Heavy minerals are gold, platinum, magnetite, hematite, ilmenite, scheelite, and cinnabar. District characterized by relatively low gold fineness, averaging 802. Gold probably derived from vein lode deposits associated with Cretaceous hypabyssal alkali intruding Mesozoic greenstone belt, or alternatively mother lode veins within the greenstone belt.</p> <p>Harrington, 1918; Hoare and Cobb, 1972, T.K.Bundtzen, written commun., 1991; Bundtzen and others, 1996.</p>			
P04-03 62°30'N 158°30'W	Iditarod Placer Au	Au, Hg, Sb, Sn, W, Cr, REE, Ag	Production of 48,563 kg Au. Years of Production: 1910-1995. Fineness: 830-905, average 870
<p>District contains gold placer deposits that occur in modern stream gravels, residual concentrations, and benches. All mining occurs within 14 km of Flat. Heavy minerals are chromite, scheelite, cassiterite, arsenopyrite, ilmenorutile, and heavy concentrations of cinnabar. Gold fineness ranges from 830 to 905 and averages 870. Extensive dredging. Nonglaciated highlands are mantled by residual material, colluvium, and silt; lowlands are covered by thick alluvium. Placer deposits on Flat, Chicken, Prince, Happy, Slate, and Willow Creeks are radially distributed around Chicken Mountain. Gold derived from polymetallic vein lode deposits in Late Cretaceous monzonitic stocks such as the Golden Horn and Chicken Mountain deposits, and from other mineralized contact zones in sedimentary and volcanic rocks of the Cretaceous Kuskokwim Group. Local bedrock of Early Proterozoic schist and metagranite, Mesozoic clastic and volcanic rocks, and Cretaceous granitic plutons.</p> <p>Cobb, 1973; Bundtzen and others, 1985, 1988, 1992a; Miller and Bundtzen, 1993; Bundtzen and others, 1996.</p>			
P04-04 61°00'N 158°00'W	Aniak Placer Au-Hg	Au, Ag, W, Cr, Hg, Pt	Production of 17,683 kg Au. Years of Production: 1908-1995. Fineness: Average 925 at Tuluksak River and 880 at Aniak River
<p>Placer gold in district mined from modern streams and benches; Nyac area and Crooked Creek basin most productive. Placer deposits in Nyac area distributed in glacio-fluvial outwash below terminus of Early Wisconsin and pre-Wisconsin glacial deposits. Older bench levels in Donlin area are probably Late Tertiary in age. Heavy minerals are gold, magnetite, garnet, scheelite, cassiterite, pyrite, cinnabar, stibnite, and monazite. Placer cinnabar mined from Cinnabar Creek. Gold probably derived from polymetallic vein lode deposits in contact zones in graywacke of the Cretaceous Kuskokwim Group intruded by Cretaceous hypabyssal granitic plutons. Local bedrock is Cretaceous sedimentary and volcanic rocks, and granitic plutons.</p> <p>Cady and others, 1955; Cobb, 1973; T.K.Bundtzen, written commun., 1992; Bundtzen and others, 1996.</p>			

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
P05-01 63°40'N 150°50'W	Kantishna Placer Au	Au, Ag, Sb, Pb, W, Mn	Production of 3,088 kg Au; also minor Sb, Ag, W. Years of Production: 1905-1986. Fineness: Large range of 550-900, average of 725
<p>Placer deposits in district occur in modern streams and benches. Highlands glaciated. Lowlands covered by glaciofluvial and eolian deposits. Most mining on streams near Kantishna. Scheelite and nuggets of native silver recovered. Heavy minerals are very numerous, including: magnetite, scheelite, galena, sphalerite, stibnite, arsenopyrite, and minor cassiterite. District contains widest fineness range of all Alaskan placer districts. Gold in district probably derived from polymetallic or Au-bearing quartz vein lode deposits that formed during Cretaceous regional metamorphism and(or) plutonism in Yukon-Tanana terrane. Local bedrock is mainly middle Paleozoic or older metasedimentary and metavolcanic rocks, and Cretaceous granitic plutons.</p> <p>Capps, 1919; Cobb, 1973; Bundtzen, 1981, 1983a.</p>			
P05-02 62°45'N 155°00'W	McGrath Placer Au, Hg	Au, Sn, W, Bi, REE, Hg, Cu, Pb	Production of 4,074 kg Au, accessory Hg and Ag. Years of Production: 1910-1995. Fineness: 860 in Nixon Fork area, 910 in Candle Creek
<p>District contains stream and bench placers that are mined by hydraulic methods and one dredge. Productive areas are Hidden Creek and tributaries of Nixon Fork, Carl and Candle Creeks in the Candle Hills, and Alder Gulch on Vinasale Mountain. Candle Creek area most productive and contained gold nuggets up to 62 g. Heavy minerals are gold, cinnabar, bismuthinite, chromite, zircon, magnetite, pyrite, and scheelite; with trace ferro-platinum. Gold fineness in Candle Creek averages about 910; in the Nixon Fork area about 860. Gold in district probably derived from polymetallic vein, and related lode deposits in Late Cretaceous hypabyssal monzonite plutons. Placers from Hidden Creek and Nixon Fork area probably derived from Nixon Fork gold skarn deposits. Local bedrock is Paleozoic limestone, Cretaceous sandstone, shale, and granitic rocks.</p> <p>Mertie, 1936; Cobb, 1973; Bundtzen, 1986; Bundtzen and Laird, 1983b; Bundtzen and others, 1987; Bundtzen and others, 1996.</p>			
P05-03 62°20'N 151°00'W	Yentna Placer Au	Au, Cu, Ag, Pt	Production of 6,133 kg Au. Years of Production: 1905-1995. Fineness: 835-870, average 850
<p>Placer deposits consist of stream and bench deposits, Pleistocene glaciofluvial deposits, and Tertiary conglomerates. Glacial and alluvial deposits blanket much of area. Most production in Cache Creek area from dredging operations. Heavy minerals are gold, platinum, cassiterite, scheelite, native copper, sulfides, and uranium and thorium minerals. Gold fineness ranges from 835 to 870, averaging 850. Gold in district probably derived from Au-bearing quartz and polymetallic vein lode deposits associated with granitic plutons and dikes, and Upper Jurassic and Lower Cretaceous clastic rocks. Local bedrock is Late Jurassic and Early Cretaceous flysch, Cretaceous granitic plutons, and Tertiary conglomerate.</p> <p>Capps, 1913; Mertie, 1919; Cobb, 1973; Bundtzen and others, 1996.</p>			
P06-01 64°00'N 148°30'W	Bonnifield Placer Au	Au, Ag, Hg, Pt, Sn, W	Production of 2,325 kg Au. Years of Production: 1903-1995. Fineness: 825-900, average of 855
<p>Placer gold occurs in streams and a few benches. Thick glaciofluvial deposits and loess cover much of district. Heavy minerals include various sulfides, scheelite, cassiterite, and cinnabar; PGE are found in Daniels Creek. Gold in district probably derived from Cretaceous or early Tertiary Au-bearing quartz or polymetallic vein lodes and middle or older kuroko massive sulfide deposits in Yukon-Tanana terrane, with probable recycling through Tertiary gravels. Local bedrock is Paleozoic or older metasedimentary and metavolcanic rocks of the Yukon-Tanana terrane, and Cretaceous granitic plutons.</p> <p>Capps, 1912; Cobb, 1973; Gilbert and Bundtzen, 1979; Bundtzen and others, 1996.</p>			

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
P06-02 63°00'N 143°30'W	Valdez Creek Placer Au	Au, Cu, Pb	Production of 15,763 kg Au. Years of Production: 1905-1995. Fineness: Narrow value of 852
<p>Valdez Creek placers exhibit a complex Pleistocene history. Gold produced from modern stream gravels and from channels is ancestral to Valdez Creek and is buried by up to 60 m of till and glacio-fluvial deposits. Main pay channels considered to be Sangamon (mid Pleistocene) in age. District mined by open pit and sluice methods. Heavy minerals are gold, magnetite, pyrite, zircon, sphene, sillimanite, kyanite, galena, realgar, orpiment, hessite (a silver telluride). Gold in district probably derived from polymetallic vein deposits associated with Cretaceous granitic rocks. Extensive recent mining; currently the largest placer mine in Alaska. Other smaller placer mines in district include White, Black, and Timberline Creeks, and Lucky Gulch. Local bedrock is Late Jurassic or older metasedimentary rocks, Mesozoic graywacke, and Cretaceous and early Tertiary granitic plutons.</p> <p>Chapin, 1918; Capps, 1919; Tuck, 1938; Smith, 1970; Cobb, 1973; Bressler and others (1985); Fechner and Herzog, 1990; Reger and Bundtzen, 1990; Bundtzen and others, 1996.</p>			
P06-03 63°20'N 146°00'W	Delta River Placer Au	Au	Production of 204 kg Au. Years of Production: 1903-1995. Fineness: average 825
<p>Gold probably derived from numerous occurrences and prospects of polymetallic vein and porphyry Cu deposits associated with late Paleozoic porphyries and Mesozoic granitic plutons intruding upper Paleozoic sedimentary and submarine volcanic rocks of the Slana Spur and Eagle Creek Formations and from mineralization in the Yukon-Tanana terrane. Glacial and glaciofluvial deposits cover most of district. Local bedrock is late Paleozoic sedimentary and volcanic rocks, mafic to ultramafic sills, and Cretaceous granitic plutons on the southern portion; and Yukon-Tanana terrane in the northern portion.</p> <p>Rose, 1965a; Cobb, 1973; I.M. Lange and W.J. Nokleberg, written commun., 1984; Bundtzen and others, 1996.</p>			
P06-04 63°00'N 144°30'W	Chistochina Placer Au	Au, Pt, W, Cr, Zn, Hg, Pb	Production of 5,637 kg Au. Years of Production: 1898-1995. Grade: 0.51 g/m3 at Round Wash; 1.12 g/m3 Ag at Quartz Creek. Fineness: 862-887
<p>Most placer mining in district occurs in the extreme headwaters of Chistochina River on Miller Gulch and Slate Creek. Gold occurs in Tertiary conglomerate named "Round Wash". Source not known for either lode gold or rock clasts in Tertiary conglomerate; source presumably offset along nearby Denali fault. Placer gold also produced from glacial drift in valleys in area. Heavy minerals are gold, platinum, magnetite, pyrite, chromite, native copper, native silver, galena, cinnabar, garnet, and scheelite. Gold fineness has a narrow range of 862 to 887, indicating a single lode source. Local bedrock is late Paleozoic sedimentary, volcanic, and granitic plutonic rocks.</p> <p>Rose, 1967; Cobb, 1973; Yeend, 1981a, b; Foley and Summers, 1990; Bundtzen and others, 1996.</p>			
P06-05 61°40'N 149°00'W	Willow Creek Placer Au	Au, Cu, W, Pt	Production of 1,737 kg Au. Years of Production: 1900-1995.
<p>Bulk of placer gold in district produced from Grubstake Gulch and Willow Creek. Heavy minerals include gold, chalcopyrite, and platinum. Placers derived from polymetallic vein or Au-bearing quartz vein deposits in the Jurassic Talkeetna Mountains batholith, adjacent schist, or recycled in Tertiary conglomerate. Local bedrock is Jurassic granitic rocks, and Tertiary conglomerate.</p> <p>Capps, 1915; Jasper, 1967b; Cobb, 1973; Bundtzen and others, 1996.</p>			

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
P06-06 61°40'N 145°00'W	Nelchina Placer Au	Au, Pt, W	Production of 439 kg Au. Years of Production: 1912-1995. Fineness: 812-819
Gold occurs in stream gravels and low benches in Busch, Yako, and Alfred Creeks. Fine gold occurs in glacial and glaciofluvial deposits of Wisconsin age. Much of gold occurs within 1 m of bedrock and on bedrock surface. Scheelite and platinum occur in some samples. Gold probably derived from auriferous deposits in the Talkeetna Formation; however, most gold interpreted as recycled from Tertiary continental deposits.			
Moffit and Capps, 1911; Chapin, 1918; Jasper, 1967b; Cobb and Matson, 1972; T.K.Bundtzen, written commun., 1991; Bundtzen and others, 1996.			
P06-07 61°10'N 149°30'W	Hope Placer Au	Au, Cu, Sb, Hg, Pb	Production of 2,090 kg Au. Years of Production: 1888-1995. Fineness: 812-856
Gold occurs in streams and bench gravels; recycled in part from glacial and glaciofluvial deposits. Mills and Canyon Creeks are most productive streams. Mining with small dredges and hydraulic systems. Heavy minerals are gold, native silver, native copper, sulfides, scheelite, and cinnabar. Largest deposit at Crow Creek placer: estimated 1,200,000 m ³ grading 1.1 g/m ³ ; gold occurs in blue or yellow clays near false bedrock; most production from bench gravels. Gold in district mostly derived from Au-bearing quartz vein deposits in metagraywacke and phyllite of the Upper Cretaceous Valdez Group. Local bedrock is Upper Cretaceous graywacke and phyllite.			
Moffit, 1906; Martin and others, 1915; Cobb and Richter, 1972; Jansons and others, 1984; Winkler and others, 1984; Bundtzen and others, 1996.			
P07-01 64°01'N 140°43'W	Sixtymile Placer Au	Au	Production of 10,634 kg fine Au. Years of Production: 1870-1994. Fineness: 775-855
District is underlain by metamorphosed Proterozoic to Paleozoic rocks of the Yukon-Tanana terrane that is intruded by Devonian and Mississippian plutons (Simpson Range suite), Middle Jurassic pegmatitic and aplitic dikes (Klotassin suite), and Upper Cretaceous porphyritic dikes and related volcanics, (Carmacks Group andesites and dacites), which are in turn overlain by Quaternary alkali-olivine basalts (Selkirk Group). Area was not glaciated. Two potential lode sources exist for placer gold; structurally controlled polymetallic Au-Ag veins in the metamorphic rocks, e.g. Mosquito Creek, Connaught, and Tertiary epithermal mineralization. Epithermal veins are subdivided into a quartz-pyrite-arsenopyrite-gold-bearing assemblage and a quartz-galena-sphalerite-silver-bearing assemblage.			
Hughes and others 1986; Glasmacher and Friedrich, 1992; Thompson, and Van Kalsbeek, 1993; Fuller, 1995; Bundtzen and others, 1996.			
P07-02 63°42'N 138°36'W	Klondike Placer Au	Au	Production of 217,089 kg fine Au. Years of Production: 1870-1994. Fineness: 685-860
District is underlain mainly by Klondike Schist that consists of folded, and faulted quartz-mica, chlorite, sericite and pyritic-graphitic schists, quartzites, phyllites, and highly sheared quartz porphyry sills. Area contains two suites of intrusives, a Cretaceous granodiorite suite and an Eocene bimodal quartz-feldspar porphyry/plag-phyrlic-mafic porphyry suite. Auriferous quartz veins and boudins occur in the schists and represent two different periods of vein formation. Generally barren quartz veins also occur in the Eocene rocks. Epithermal style veins with anomalous precious metals occur in Quaternary rocks. The Klondike placers were formed during late Tertiary uplift. The area has not been glaciated. Most important placer deposits occur in gravels in the bottom of valleys, resting on bedrock. Gravel is locally derived from the schists. The White Channel gravels are comprised dominantly of quartz. They are ancient deposits as well, probably dating back to the Pliocene. A later period of uplift, Late Pleistocene or Recent, has resulted in modern streams channelling deeply into the old gravel deposits, further concentrating the gold.			
Boyle, 1979; Thompson, and Van Kalsbeek, 1993.			

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
P07-03 63°00'N 138°35'W	Stewart River Placer Au	Au	Production of 23,777 kg fine Au. Years of Production: 1870-1994. Fineness: 728-903
District occurs on the unglaciated Klondike Plateau and is underlain by metamorphosed Proterozoic to Paleozoic rocks, intruded by Devonian and Mississippian plutons of the Simpson Range suite, mid-Cretaceous intrusions of the Whitehorse suite, and partially overlain by Tertiary Carmacks Group volcanics. Fluvial gravel deposits, the principal placer gold producer are found both in modern streams and on bedrock terraces up to 100m above present stream levels. Gravels consist of predominantly metamorphic clasts with lesser volcanic clasts. Soil development on the gravels suggest they predate the oldest Pleistocene glaciation. They may be the same age as the White Channel gravels in the Klondike area. The Moosehorn Range granodioritic pluton, part of the Triassic Klotassin Batholith, contains auriferous polymetallic-quartz veins that contain native gold occurs in arsenopyrite, galena, boulangerite and sphalerite.			
Yukon Minfile, 1990; Thompson, and Van Kalsbeek, 1993; Fuller and Anderson, 1993; Murphy and others, 1993.			
P07-04 62°15'N 142°00'W	Chisana Placer Au	Au, Ag	Production of 2,425 kg Au. Years of Production: 1910-1995. Fineness: 797-866, average 830
Placer deposits occur generally within a few kilometers of Bonanza Creek area. Most gold derived from Tertiary gravel. Heavy minerals are native copper, native silver, galena, cinnabar, and molybdenite. Most placer deposits are in Tertiary conglomerate that occur near or are deposited on volcanic and sedimentary rocks of the Lower Cretaceous Chisana Formation. Unconsolidated glacial and fluvial deposits cover most lowlands. Local bedrock is Early Cretaceous volcanic rocks and flysch.			
Capps, 1916; Richter and Matson, 1972; Bundtzen and others, 1996.			
P07-05 61°18'N 138°32'W	Kluane Placer Au	Au	Production of 2069 kg fine Au. Years of Production: 1870-1994. Fineness: 798-874
District straddles the Denali Fault, and is underlain mainly by volcanic rocks of the Wrangellia terrane to the south, and metamorphic rocks of the Windy and adjacent metamorphic terranes to the north, as well as by plutons of the early Tertiary Bennett suite. The stocks are highly fractured and contain porphyry Cu-Mo occurrences and pyritic quartz veins, which are likely sources of gold.			
Yukon Minfile, 1990; Thompson and Van Kalsbeek, 1993.			
P07-06 61°20'N 142°45'W	Nizina Placer Au	Au, Ag, Sb, Cu, Pb, Mo	Production of 4,618 kg Au. Years of Production: 1900-1991. Fineness: 894-903, average 900
Placer deposits occur in Quaternary sediments in valley fills and on benches. Native copper produced from some placers. One 3-tonne native copper nugget recovered. Heavy minerals are gold, native copper, native silver, and galena. Gold probably derived from vein deposits in Cretaceous or early Tertiary granitic plutons. Some gold possibly derived from Cu-Ag vein deposits in the Nikolai Greenstone. Local bedrock is Late Jurassic and Early Cretaceous flysch, and Cretaceous and early Tertiary granitic plutons.			
Moffit, 1914; Cobb and Matson, 1972; Cobb and MacKevett, 1980; T.K.Bundtzen, written commun., 1991; Bundtzen and others, 1996.			

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
P07-07 60°05'N 142°00'W	Yakataga Placer Au	Au, Ag, Cr, Cu	Production of 561 kg Au. Years of Production: 1898-1992. Fineness: 892-896
Gold occurs in beach deposits along coastal plain extending east-southeast from mouth of Copper River. Gold also occurs in bench and streams of White River. Heavy minerals are gold, magnetite, zircon, chromite, rutile, and native copper. Narrow fineness range suggests a single lode source for the placer. Probably derived from variety of bedrock sources drained by Copper River, including: (1) graywacke and argillite of lower Tertiary Orca Group and associated mafic extrusive rocks and mafic and granitic plutons, and (2) metagraywacke and phyllite of the Upper Cretaceous Valdez Group, and associated mafic extrusive rocks and granitic plutons. Possible recycling of glacial deposits in region.			
Maddren, 1914; Cobb, 1973; Bundtzen and others, 1996.			
P08-01 64°03'N 135°51'W	Mayo-McQuesten Placer Au	Au	Production of 8252 kg fine Au. Years of Production: 1895-1994. Fineness: 695-938
District occurs within the Selwyn Basin and is underlain by Late Proterozoic to Mississippian clastic sedimentary rocks of Hyland, Road River and Earn Groups are imbricated along three Jurassic and Cretaceous thrust faults. Area intruded by mid-Cretaceous felsic plutons of Tombstone and Selwyn suites. Associated with plutons are quartz-Au-arsenopyrite, quartz-Au-Sb-Ag and Sn-W veins, and W-Cu-Au skarns and breccias. Placer gold was discovered on Haggart Creek in 1895 and on Dublin Gulch in 1898. Galena, sphalerite, scheelite and jamesonite occur in placer gravels.			
Yukon Minfile, 1990; Emond and Lynch, 1992; Thompson and Van Kalsbeek, 1993; Murphy and Heon, 1995.			
P08-02 62°06'N 137°13'W	Klotassin-Dawson Range Placer Au	Au	Production of 625 kg fine Au. Years of Production: 1870-1994. Fineness: 800-860
District underlain by Paleozoic and upper Proterozoic basement metamorphic rocks of the Yukon-Tanana terrane that are intruded by Upper Triassic to Jurassic granodiorite (Klotassin Batholith), porphyritic syenite, and quartz monzonite of the Jurassic Big Creek Plutonic suite. Bedrock also intruded by Early Cretaceous Dawson Range granite and granodiorite, and by Late Cretaceous Carmacks volcanic suite quartz-feldspar porphyries and related massive flows and lapilli tuffs. Metamorphosed Cu-Au-Ag porphyry style deposits, as at Minto Copper and Williams Creek are associated with porphyry intrusions of the Klotassin suite, and Cu-Au porphyry deposits with Late Cretaceous Carmacks suite as at Casino and Cash. Au skarns and veins occur peripheral to several plutonic suites. Several placer deposits occur in Recent valley alluvium and Pleistocene terraces occur near or on lode deposits; other placers are more distal. Deep tropical weathering of the bedrock occurred during the Tertiary Period. Two Pre-Reid glaciation events later covered the area. Reid glaciation did not reach the area but extensive aggradation occurred. Glacial material is not generally gold-bearing, only where glaciers cut mineralized bedrock. Gold is concentrated at interfaces between bedrock, gravel and diamicton.			
Yukon Minfile, 1992; Jackson, 1993; Thompson and Van Kalsbeek, 1993; Kreft, 1994; LeBarge, 1995.			
P08-03 61°24'N 134°23'W	Big Salmon-Teslin Placer Au	Au	Production of 2400 kg fine Au. Years of Production: 1905-1994. Fineness: 700-895
District underlain by Paleozoic schist and quartzite of the Yukon Cataclastic Complex of the Yukon-Tanana terrane along the Teslin Suture Zone, and by fault slices of Slide Mountain and Cache Creek oceanic terranes. Feldspar porphyry dikes, probably equivalent to Late Cretaceous Carmacks Group volcanics, are associated with auriferous quartz-sulphide veins. Chemistry, mineralogy and fluid inclusion studies indicate the placer gold is derived from veins.			
Stroink and Friedrich, 1992; Yukon Minfile, 1992; Thompson and Van Kalsbeek, 1993.			

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
P09-01 60°45'N 130°30'W District underlain by tightly folded and metamorphosed Proterozoic and Lower Cambrian carbonate and siliciclastic rocks of Cassiar terrane that contains Pb-Zn-Ag deposits. Structural emplacement of the Slide Mountain and Kootenay terranes in Late Jurassic to Early Cretaceous was accompanied by the intrusion of widespread granitic and granodioritic plutons. Major dextral strike-slip faulting occurred during late Cretaceous and early Tertiary times. Tertiary and Quaternary volcanic rocks also occur in district. Yukon Minfile, 1978.	Laird River Placer Au	Au	Production of 1.5 kg fine Au. Fineness: 800
P54-01 61°01'N 138°09'E District contains about 150 placer deposits, mostly in the Allak-Yun and Yudoma River basins. Small channel-fill placers occur in the northern part of this area. Medium-size and some large valley placers and sparse bench placers occur in the middle of district. Flood-plain placer deposits and some channel-fill deposits occur in southern part of district. Gold placers occur in interglacial deposits. Gold-bearing beds range from 0.5 to 3 m thick. Depth of overburden ranges up to 100 m. The highest-grade gold placers occur in the southern part of the district. Placers range from 1 to 10 km long and up to 200 m wide. Gold nuggets to 1 kg weight are found. Bedrock sources are Au quartz vein deposits. Individual placer deposits are Zhar Creek, Yur-Duet, and Brindakit. Zhar Creek placer deposit is 7 km long. Average thickness of the gold-bearing bed is 1.4 m and the overburden is 3.5 m thick. Fine gold (particles less than 1 mm in size) comprise 87% of all gold. Five percent of gold occurs as nuggets weighing 10 to 200 g. Bedrock source of this placer is Au quartz veins. 2.7 tonnes gold produced between 1940 to 1964. Yur-Duet and Brindakit placer consist of several auriferous placer zones. Largest is 10 km long and from 10-300 m wide. Gold grade is 1-7.3 g/m ³ . The gold-bearing bed is 0.2-3.2 m thick, with 20-30 m overburden. The average size gold particles is 1-2 mm, fineness 813-844. Gold nuggets to 1,050 g weight were common at the Yur placer deposit. About 20 tonnes of gold produced between 1940-1964. P.P. Smirnov, written commun., 1961; V.I. Korostev, written commun., 1963; Trushkov, 1971; N.L. Kobtseva, written commun., 1988.	Allakh-Yun Placer Au	Au	Production of about 23 t between 1940 to 1964. Grade: 1 to 10 g/m ³ Au. Fineness: 813-844

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
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P55-01 62°50'N 147°52'E	Susuman-Chai-Yuryuyen Placer Au	Au	Grade: District average of 1-20 g/m ³ Au, Berelekh: 1-15 g/m ³ Au, Chai-Yuruyue: 1-20 g/m ³ Au. Fineness: 800-900; average of 867
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District contains the largest concentration of placer gold deposits in the central Kolyma region. More than 400 individual placer deposits have been exploited. Deposits are Lower to Upper Pleistocene and most are buried to shallow depths (up to 15 m). Terrace and buried or ancestral placers occur in neotectonic hollows at depths of up to 300 m. Placers of ancestral streams occur in interstream areas. Major portions of the placer deposits are now worked out. Lode sources of the placer mineralization are quartz veins, mineralized dikes, and zones of low-sulfide gold-quartz veinlets. Major deposits are at Berelekh and Chai-Yuruyue.

Berelekh placer deposit occurs in a seventh-order stream drainage system. Gold-bearing stratum are 4-5 m thick. Some coarse gold is recovered. Gold distribution is extremely irregular, with deposits concentrated in pods. Terrace deposits occur within eighth-order stream drainages and placers ancestral to and diagonal to the trend of modern stream courses also occur.

Chai-Yuruyue placer deposit occurs in a fifth-order stream drainage system. Gold-bearing stratum are 1.2 m thick. Coarse gold is common; more than 60% of the gold being 4 mm or larger. Largest nuggets exceed 1 kg in weight. Gold is intergrown with quartz. Gold fineness averages 869. Gold derived from quartz-vein zones and dikes of intermediate composition which contain 1.6 to 12 g/m³ gold.

P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.

P55-02 61°53'N 149°39'E	Sanga-Talon Placer Au	Au	Grade: Elgenya deposit: 3 to 12 g/m ³ Au. Fineness: 750-900
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Placer deposits occur in a northwest-trending zone that crosses the Kolyma River valley. More than 96 placer deposits are delineated in first-to-ninth order stream drainages. Main gold concentrations occur in third-to-sixth order stream systems, with gold about equally divided between terrace and modern valley deposits. Most placers occur in higher order stream valleys that occur in terrace alluvium. Placer deposits range in age from Lower Pleistocene to Holocene, but Upper Pleistocene deposits are predominate. Gold-bearing stratum range in thickness from 1.2 to 1.4 m; most are buried by 3 to 70 m of overburden. Gold is mostly coarse and intergrown in low-sulfide quartz-arsenopyrite veins with gold content of 12 to 15 g/t. The connection of placer deposits to original lode sources is strongly expressed in Vetren Region, where placer deposits occur near and are derived from lode sources in the valley. The Elgenya deposit is a major example in the district.

Elgenya placer deposit occur in terrace alluvium along a sixth-order stream drainage system. Auriferous alluvium occurs in four distinct levels within the terrace deposits, at depths of 5, 25, 50, and 80 m. The two youngest terrace deposits are of middle Pleistocene age. Placer deposits locally range up to widths exceeding 200 m, and gold-bearing pay zones range from 0.8 to 1 m thick. Auriferous deposits are commonly concentrated in small pod-like zones. Coarse gold is common and gold fineness ranges from 837 to 863. Buried placers up to 40 m thick occur under slope and glacial deposits.

P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
P55-03 61°24'N 148°41'E District contains than 100 placer deposits that occur in a northwest-trending zone that is confined to the central part of Ayan-Yuryakh anticlinorium. The most concentrated areas of placer development occur in Upper Pleistocene to Holocene age deposits of third- to fifth-order streams. Most placer deposits occur in relatively shallow in valley alluvium. Auriferous terrace alluvium is only poorly preserved, and contains subordinate gold values. Alluvial placers also occur. Gold fineness exhibits a wide range from 510 to 900, but averages 800 to 850. Most placer deposits are exhausted. Lode sources are quartz-carbonate low-sulfide veins, zones, and dikes, and contain up to 20 g/t gold. An major deposit occurs at Omchak. Omchak placer deposits occurs in a fifth-order stream drainage and reach maximum widths of 510 m and thicknesses of 2 to 3.3 m. Gold is generally fine-grained (0.6-0.9 mm); fineness ranges from 740 to 811. Lode sources of gold are sheeted low-sulfide quartz vein systems in the Nataika and Pavlin deposits, and from other lode gold deposits that contain 3 to 7 g/t gold. P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.	Tenka Placer Au	Au	Grade: District average of 1-10 g/m3 Au. Fineness: 510-900
P56-01 62°23'N 150°50'E District contains more than 270 individual placer deposits. Most deposits occur in Upper Pleistocene placers up to 8 m thick, and less commonly in Middle and Lower Pleistocene deposits. Buried placers occur in Seimchan-Buyundin and Taskan hollows. Gold is variable in size; several nuggets of more than 4 kg have been recovered. The bulk of the gold consists of small flakes and grains with fineness of 710 to 975. Original lode sources are quartz veins that contain up to 300 g/t gold, and shear zones and dikes that contain up to 14 g/t gold. Major deposits occur at At-Yuryakh and Orotukan. At-Yuryakh placer deposit occurs in terrace alluvium in a fifth-order drainage system. Pay channels increase in width and gold grade increases in the mouths of tributary streams, where placer deposits are up to 900 m wide. Thickness of gold-bearing stratum ranges from 0.4 to 3.8 m. Gold consists mainly of well-rounded, laminated, fine grains; fineness ranges from 916 to 980. Major impurities are admixtures of silver and zinc. Cassiterite, scheelite, and ilmenite occur in placer concentrates. Orotukan placer district occurs in terrace alluvium in a sixth-order drainage system. More persistent placers occur in 10-m thick terrace alluvium where gold-bearing stratum range up to 1.4 m thick. Cassiterite and scheelite occur in noneconomic concentrations. P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.	Debin-Orotukan-Srednikan Placer Au	Au	Grade: At-Yuryakh deposit: 5 g/m3 Au. Fineness: 710-980
P57-01 62°07'N 161°14'E Gold placer deposits occur in second-to-fourth order valleys in the northern and central parts of Tiagonoss Peninsula. At least 12 placer deposits are known; largest are at Avekov, Pylgin, and Kolymak Rivers. Placer deposit types include alluvial, and flood plain. Rare terrace alluvial and spit placers, with a width up to 100 m, occur in the Avekov River valley. Most of the placer deposits are Holocene, and rarely Pleistocene. The Prima placer deposit which occurs at depths of 45 m, is interpreted as Early Quaternary. Most placers are shallow (0.4-2.6 m depth), and gold is complexly distributed throughout the alluvium. Several placer deposits forming. Gold grains are small (0.5-0.8 mm), laminated, and mainly well-rounded. Gold-bearing quartz veins and zones in metamorphosed rocks of the Avekov block, and Mesozoic sedimentary and volcanic rocks are the principal lode sources. Lode deposits range up to 8 g/t gold. P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.	Taigonoss Placer Au	Au	Grade: 1-6 g/m3 Au.

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
P58-01 63°53'N 164°35'E	Vidny Creek Placer Au	Au	Estimated production of 560 kg. Probably exhausted. Grade: Estimated up to 0.6 g/m ³ . Fineness: 625
District contains shallow alluvial placer up to 4000 m long and 100 m wide. Heavy minerals are hematite, ilmenite, zircon, and rutile. Gold is derived from areas in bedrock with adularia-quartz-metasomatic, propylitic, and argillic alteration; which occur on the floors and slopes of valleys.			
V.N. Pavlov, written commun., 1988.			
P58-02 63°33'N 163°40'E	Kedrovyy Creek Placer Au	Au	Estimated production of 300 kg. Probably exhausted. Grade: Estimated 0.7 to 1.44 g/m ³ . Fineness: 630 to 650
District contains flood plain and buried alluvial placers. Deposit length varies from 1000 to 3000 m, and ranges up to 70 m wide. Major heavy minerals are magnetite (up to 60%), epidote, hematite, pyrite, and zircon. Gold is fine-grained about 0.5-0.6 mm. Source of the placers interpreted as gold-silver-adularia-quartz veins.			
V.A. Korovkin, written commun., 1991.			
P58-03 63°37'N 167°10'E	Pravaya, Kondyrevka River Placer Au	Au	Production of more than 300 kg Au. Grade: Up to 0.66 g/m ³ . Fineness: 890
Districts contain shallow alluvial placer that are over 8000 m long and range up to 115 m wide. Grains range from 0.25 to 1.0 mm. Magnetite is dominant in heavy-mineral concentrate. Ilmenite, pyrite, limonite, and epidote occur in electromagnetic fraction. Gold was derived from Au quartz veins.			
Yu.I. Ivintaksov, written commun., 1988.			
P58-04 63°20'N 166°37'E	Ushkan'e River Basin Placer Au	Au	Produced more than 1000 kg Au. Grade: 0.8 to 1.2 g/m ³ in shallow deposits, up to 2.5 g/m ³ in buried placers. Fineness: 850
District contains two types of placers: (1) surface deposits ranging from 0.8 to 1.2 g/m ³ Au; and (2) alluvial placers buried up to several m deep containing up to 2.5 g/m ³ Au. Shallow placers are related to the flood plains and flood plain terraces. Length of placers ranges from 1500 to 8600 m and width ranges from 50 to 200 m. Gold grains are 0.15 to 2.0 mm. Magnetite, hematite, ilmenite (up to 19%), amphibole, pyroxene, and zircon occur in heavy-mineral fraction. Gold is derived from hydrothermally-altered rocks. Linear weathering crusts occur in the bottom of the valleys.			
B.V. Dvoretzky, written commun., 1982.			
P58-05 62°40'N 167°05'E	Gorelaya River Placer Au	Au	Grade: Ranges from a few g/m ³ to 5.3 g/m ³ . Fineness: 788
District contains numerous shallow and alluvial, and rare proluvial and diluvial placers. Deposits range from a few hundred to 2700 m long. Gold is fine grained, rarely up to 2 mm. Magnetite (up to 66%), ilmenite (up to 77%), hematite, pyroxene, epidote, garnet, zircon, marcasite, galena, sphalerite, and anatase occur in heavy mineral fractions. Gold derived from veinlets and disseminations in carbonate rocks in volcanoclastic rocks.			
S.V. Spivak, written commun., 1989.			

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
P58-06 62°09'N 162°41'E	Perspektivny Creek, Kechichma River Placer Au	Au	Estimated production of 440 kg. Probably exhausted. Grade: Average of 0.95 to 1.40 g/m ³ . Fineness: 850-860
<p>Districts consists of a group of shallow alluvial placers that vary from 1000 to 6000 m long and 50-60 m wide. Deposits occur in the riverbed and flood plain of Perspektivny Creek. Gold grains range from 0.5 to 2 mm. Probable lode source is Au quartz veins.</p> <p>P.I. Chehculin, written commun., 1990.</p>			
P58-07 62°16'N 164°22'E	Smyaty and Grif Creeks Placer Au	Au Pt	Production pf 25 kg Au. Grade: Up to 1.45 g/m ³ . Fineness: U to 912
<p>Districts contain shallow alluvial placers that are related to flood plain and terraces, up to 1600 m long and 30-35 m wide. Average size of gold grains is 1 mm. Heavy minerals are magnetite and chrome-spinel, with subordinate pyroxene, hornblende, ilmenite, garnet, platinum group minerals (osmiridium), pyrite, sphalerite, cinnabar, and rare silver. Platinum/gold ratio is 1/300 to 1/400. The lode source has not been determined. Gold is interpreted as partly recycled from Early Cretaceous conglomerates, and from gold-sulfide and Au quartz vein deposits that contain up to 1-5 g/t gold.</p> <p>G.P. Shipitsin, written commun., 1968; O.T. Kovalishin, written commun., 1989.</p>			
P58-08 62°20'N 165°53'E	Kichavayam River Placer Au	Au	Estimated production of 120 kg. Probably exhausted. Grade: Up to 0.64 g/m ³ .
<p>District contains shallow placers deposits up to 900 m long and 50 m wide that occur in riverbed and flood plain alluvium. Heavy-minerals are hematite (up to 97%), pyroxene, epidote, leucoxene, garnet, zircon, chrome-spinel, corundum, and cinnabar. Gold derived from gold-sulfide quartz veins. Source lode deposits ranges from 0.4 to 28.7 g/t Au, 4.6 to 40.66 g/t Ag, up to 6.45% Zn, and up to 1% As.</p> <p>V.A. Volkov, written commun., 1986.</p>			
P58-09 61°07'N 166°48'E	Seinav-Galimanan Placer PGE	PGE	Modest production of PGE. Grade: 0.6-2.2 g/m ³ PGE .
<p>District contains several small PGE deposits that occur in influvial gravels along valley floors and in terrace alluvium, with minor deposits in colluvial slope deposits adjacent to streams. District underlain by dunite, pyroxenite, and gabbro that form part of Seinav-Galimanan zoned ultramafic complex. The Lатыренаваям River deposit is 140-340 m wide and covered by 2.8-17.1 m of overburden. PGE-bearing gravels range from 1.2-4.7 m thick. Ledinoye Creek contains terrace alluvial deposits that contain 1-7 g/m³ PGE. PGE-bearing gravels in Ledinoye Creek terrace alluvium are 1.-2.6 m thick. Platinum fineness is 874 at Ledinoye Creek. Average placer PGE concentrations for district are: 2.77% Ir, 1.25% Pd, and 0.45% Os. PGE in the ultramafic source rocks averages 1 g/tonne combined Pd, Ir, Pt, and Rh.</p> <p>Y. Frolov, this study.</p>			

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
P59-01 62°25'N 171°47'E	Vesyoly Creek Placer PGE	PGE	Grade: Average of 1.05 g/m ³ PGE.
Placer deposits associated with alluvium that occurs immediately above bedrock in flood plains and terraces 10 to 12 m high. Deposit is 7 km long and 40 m wide. Distribution of metals is uneven, averaging 1.05 g/m ³ . PGE consist of hexagonal solid solutions of osmium, iridium, and ruthenium, and cubic solid solutions of iridium (10%). PGE compounds with iron, arsenic, and sulfur also occur. PGE grains are dominantly in the 0.4 to 0.8 mm size fraction. Heavy-minerals are chromite, ilmenite, zircon, rutile, pyrite, marcasite, apatite, and garnet. Underlying bedrock consists of Upper Jurassic to Lower Cretaceous (Tithonian to Valanginian) serpentinite.			
A.V. Razumny, written commun., 1990.			
P59-02 61°00'N 171°12'E	Prizhimny Creek, Dobraya River Placer Au	Au PGE	Grade: Over 1 g/m ³ Au and 0.18 g/m ³ PGE. Fineness: 871-899
Shallow placer deposits in district display a complex genesis varying from fluvio-glacial to alluvial. Deposits are up to 1000 m long and up to 60 m wide. Seventy-five percent of gold grains range from 0.3 to 0.5 mm. Heavy-minerals consist of 85% magnetite, up to 10% chromite, and subordinate pyroxene, ilmenite, pyrite, anatase, garnet, and sparse sphalerite, galena, cinnabar, PGM, and gold. PGE grains are mostly 0.5 to 1.0 mm. Gold was derived from quartz-carbonate veins containing up to 100 g/t gold. Veins and stockworks occur along contacts within and adjacent to gabbroic, picrite, and diorite intrusions. A network of carbonate-quartz veinlets containing up to 5 g/t gold occurs along the Dobaraya River valley.			
M.B. Ivanik, written commun., 1989.			
Q01-01 67°28'N 177°20'W	Penyelkhin Placer Au	Au	No data. Fineness: 880-900
District contains as many as 10 placer deposits that occur in valleys in a mountainous area near the Vankarem lowland. The principal placer deposit is at Penyelkhin that formed during the Miocene to Pleistocene during multiple erosional events. Gold-bearing stratum is confined to a thalweg channel and a 10-m-thick terrace of alluvium that are now buried under up to 30 m of glacial drift. The Penyekhin deposit extends for 4 km and ranges up to 300 m wide. Auriferous gravels range up to 3 m thick; rarely more. The gold is concentrated in pods. Gold grains are small and average 0.5 mm in diameter. Octahedral gold crystals occur. Gold fineness ranges from 880 to 900. Low-sulfide Au quartz veins and silicified shear zones are the lode sources.			
P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.			
Q03-01 65°40'N 166°30'W	Port Clarence Placer Au-Sn	Sn, Au, REE, W, Cr, Pb, Ag, Hg, Pt	Production of 1,273 kg Au and about 1,300 tonnes of Sn.. Years of Production: 1898-1993. Fineness: 880-902
Placer deposits occur in creeks and benches that occur as much as 60 m above present-day streams. Dredge mining produced bulk of gold. Gold probably derived from low-sulfide Au-bearing quartz veins in metamorphic rocks of the Nome Group. Sn province occurs in western part of the district; about 1300 tonnes of combined placer and lode tin produced. Cape Creek placer deposit in Cape Prince of Wales area produced an average 100,000 kg tin in cassiterite concentrate each year from 1979 to 1990 when creek placer was apparently exhausted. Tin placers on streams draining contact zones around Cretaceous Sn-bearing granitic rocks and associated vein deposits. Heavy minerals in both gold and tin placers are gold, cassiterite, scheelite, cinnabar, monazite, xenotime, zircon, columbite, tantalite, and wolframite. Local bedrock is slate and schist of the Nome Group and Cretaceous granitic plutons.			
Brooks, 1901; Collier and others, 1908; Mulligan, 1959; Cobb and Sainsbury, 1972; T.K.Bundtzen, written commun., 1992; Bundtzen and others, 1996.			

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
Q03-02 65°45'N 164°50'W	Kougarok Placer Au-Sn	Au, Sn, W	Production of 5,410 kg Au.. Years of Production: 1900-1995. Fineness: 857-931
District contains large gold resources that occur in Quaternary(?) glacial outwash gravels of the Tertiary and Quaternary(?) Kougarok Gravels. Buried Tertiary gravels and conglomerates may be gold source. Most mining by dredging. Heavy minerals are gold, pyrite, magnetite, hematite, cassiterite, scheelite, cinnabar, and lead sulfides. Richest areas in Iron and Taylor Creeks and near Coffee Dome. Placer gold derived mainly from low-sulfide Au-bearing quartz veins in metamorphic rocks and from Sn lode deposits associated with Cretaceous granitic plutons. Local bedrock is schist, slate, marble, and granitic rocks.			
Collier and others, 1908; Cobb, 1973; Eakins, 1981; Bundtzen and others, 1996.			
Q03-03 64°30'N 165°30'W	Nome Placer Au	Au, Ag, W, Sb	Production of 151,595 kg Au.. Years of Production: 1902-1995. Fineness: 845-902
District produced bulk of gold from ancient beach gravels developed in till. Up to five separate elevated beaches and several submerged beaches. Modern stream gravels, and low and high alluvial benches also contain gold. Beach strandlines contain inferred (drilled) reserves of 80 million m ³ grading 0.4 g/tonne Au. Heavy mineral concentrates dominated by arsenopyrite and scheelite. Placers known for exceptionally large gold nuggets, mostly found in elliptical deposits on Anvil Mountain. Gold in district probably derived from Au-bearing quartz vein lode deposits, such as Rock Creek, and at Sophie Gulch north of Nome. Local bedrock is Paleozoic metasedimentary and lesser metavolcanic rocks of Nome Group with Au-bearing quartz veins.			
Collier and others, 1908; Moffit, 1913; Cobb, 1973; Eakins, 1981; R.V.Bailey, written commun., 1991; Bundtzen and others, 1996.			
Q03-04 64°45'N 163°30'W	Council (Includes Solomon) Placer Au	Au, W, Hg, Cu	Production of 31,706 kg Au.. Years of Production: 1989-1995. Grade: Reserves of 0.4 to 0.7 g/m ³ , known in Spruce Creek. Fineness: 826-870 in Solonom River and 902-960 in Fish River
District contains beach, modern stream, and rare bench gold placers. Heavy minerals dominated by arsenopyrite, magnetite, and scheelite. Mined mainly by dredging and sluicing. Gold in district probably derived from Au-bearing quartz vein deposits in metamorphic rocks of the Nome Group, such as the Big Hurrah Gold-Tungsten deposit. Local bedrock is schist, marble, dolomite, and thin quartz veins.			
Collier and others, 1908; Smith, 1910; Smith and Eakin, 1911; Cobb, 1973; Bundtzen and others, 1996.			
Q04-01 67°10'N 160°15'W	Kiana Placer Au	Au, nephrite	Production of 1,263 kg Au.. Years of Production: 1898-1968. Fineness: 888-913
Gold mined principally from tributaries of Squirrel River. Coarse gold, some nuggets with quartz attached. Magnetite common in concentrates. Gold and magnetite probably derived from Au-bearing quartz vein lode deposits in metamorphic rocks. Local bedrock is marble and schist.			
I.M. Reed, written commun., 1931; Cobb, 1973.			

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
Q04-02 67°00'N 157°00'W	Shungnak Placer Au	Au, Cu, Ag, Cr, Cd	Production of 465 kg Au.. Years of Production: 1898-1988. Fineness: 772-803
<p>Placer deposits occur in streams that drain Cosmos Hills. Gold source is mainly Au quartz veins that occur in metasedimentary and metavolcanic rocks. Most placer production was from Dahl Creek. Heavy minerals include gold, magnetite, chromite, native copper, and silver. Nephrite and serpentinite boulders collected from creek gravels and tailings piles. Large numbers of quartz crystals recovered from placer operations. Local bedrock is metasedimentary and metavolcanic rocks.</p> <p>Smith, 1913b; Anderson, 1945; Cobb, 1973.</p>			
Q04-03 65°45'N 161°41'W	Fairhaven (Includes Candle and Inmachuk) Placer Au	Au, Pb, W, Pt, Ag	Production of 18,865 kg Au.. Years of Production: 1900-1995. Fineness: 847-898
<p>District contains rich placer gold deposits on Candle Creek and Inmachuk River. Major streams extensively dredged; substantial resources remain unmined in buried drainages in northern part of district. Buried gold-rich channel gravel occur in vicinity of Mud Creek. Most production on Candle Creek was from left limit bench (paleo-Candle Creek) about 600 m wide and 6 km long. Placers at Kiwalik Flat occur at mouth of Paleo-Candle Creek and were partially reworked by marine conditions. Auriferous bench deposits occur 30 m above Inmachuk River and are overlain by a 5.7 Ma basalt flow. Heavy minerals are galena, magnetite, scheelite, sphalerite, and trace platinum metals. Gold probably derived from polymetallic vein lode deposits associated with Cretaceous granitic plutons or alternatively from Au-bearing quartz veins in metamorphic rocks, or alternatively from Au-bearing quartz veins in metamorphic rocks. Local bedrock consists of schist, marble, granitic plutons, and Tertiary basalt.</p> <p>Henshaw, 1909; Cobb, 1973, T.K.Bundtzen, written commun., 1991; Bundtzen and others, 1996.</p>			
Q04-04 65°00'N 161°20'W	Koyuk Placer Au, Pt	Au, Sb, W, Pt, Bi	Production of 2,616 kg Au and about 10 kg byproduct Pt.. Years of Production: 1915-1993. Fineness: 840-920 (950-966 in Dime Creek)
<p>District contains creek and bench placers at Bonanza, Dime, and Sweepstakes Creeks. Nuggets with vein quartz attached have been recovered. Mining by sluicing, dredging, and drifting. Heavy minerals are gold, magnetite, ilmenite, scheelite, stibnite, bismuthinite, wolframite, platinum, chromite, rutile, garnet, uranothorianite, hydrothorite, hematite, chrome spinel, iron and copper sulfides, galena, sphalerite, and molybdenite. Gold fineness on Dime Creek is extremely high (950-966); fineness values average 840 and 920 in Sweepstakes and Ungalik Creeks respectively. Gold probably derived from polymetallic vein and other lode deposits associated with Cretaceous granitic plutons. Altered ultramafic rocks found in Dime Creek drainage may be source of platinum. Local bedrock is schist, marble, granitic plutons, and Cretaceous sedimentary rocks.</p> <p>Smith and Eakin, 1911; Harrington, 1919; Cobb, 1973, T.K.Bundtzen, written commun., 1991; Bundtzen and others, 1996.</p>			
Q05-01 68°00'N 156°00'W	Noatak Placer Au	Au	Production of 242 kg Au.. Years of Production: 1898-1989.
<p>Gold mined mainly from Lucky Six Creek and small tributaries. Nearby lode deposit contains sulfides and gold. Gold probably derived from Au quartz or polymetallic vein deposits. Local bedrock consists of marble, metasedimentary, and metavolcanic rocks. District occurs in a National Conservation unit where mining is prohibited.</p> <p>Smith, 1913b; Cobb, 1973; Bundtzen and others, 1996.</p>			

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
Q05-02 67°15'N 150°45'W	Wiseman (Koyukuk) Placer Au	Au, Bi, Cu, W, Pb	Production of 10,578 kg Au.. Years of Production: 1893-1995. Fineness: 925-975
<p>Glaciation in parts of district has caused disarrangements of drainage, resulting in complex placer deposits. Gold-rich gravels occur in modern streams, bench, and buried stream deposits on bedrock. Large nuggets include 4.29 kg nugget on Hammond River and 1.28 kg on Nolan Creek. Large nuggets more common than elsewhere in Alaska. Heavy minerals are gold, stibnite, native silver, native copper, native bismuth, scheelite, pyrite, chalcopryrite, cinnabar, rutile, cassiterite, monazite, andalusite, and kyanite. Larger deposits at Hammond River and Nolan Creek.</p> <p>Hammond River contains an estimated 210,000 m³ grading 5.1 g/m³ Au and 0.32 g/m³ Ag. Total production of up to 1.84 million g Au. Estimated production of 3.1 million g Ag. Deposit mined by drift and sluice methods. Placer deposit mostly occurs within lower 5 km of mouth of Koyukuk River. Placer mining from 1900 until 1942.</p> <p>Nolan Creek contains an estimated 146,000 m³ grading 12 g/m³ Au. Drift mining employed. Local stibnite veins occur in metamorphic and granitic rocks. Deposits in district probably derived from Au quartz veins and Sb-Au vein deposits. Local bedrock consists of metasedimentary rocks, granitic plutons, and Cretaceous sedimentary rocks.</p> <p>Maddren, 1913; I.M.Reed, written commun., 1938; Brosge and Reiser, 1960; Cobb, 1973; Dillon, 1982; Bundtzen and others, 1996.</p>			
Q05-03 65°50'N 155°00'W	Hughes-Koyukuk Placer Au	Au, Cu, Pb, Ag, Sn, Pt, Zn	Production of 7,212 kg Au.. Years of Production: 1910-1995.
<p>Gold in derived from streams draining contact zones around Cretaceous granitic plutons near Indian Mountain and in southern Zane Hills. Recent dredging on Bear Creek where most production has occurred. Most of area not glaciated. Gold probably derived from polymetallic vein and other lode deposits associated with Cretaceous granitic plutons. Local bedrock is Jurassic and Cretaceous clastic and volcanic rocks, and granitic plutons.</p> <p>Eakin, 1916; Miller and Ferrians, 1968; Cobb, 1973; T.K. Bundtzen, written commun., 1990; Bundtzen and others, 1996.</p>			
Q05-04 65°30'N 152°30'W	Melozitna (Gold Hill) Placer Au	Au, Sn, Pb, Ag, Zn, Cu	Production of 355 kg Au.. Years of Production: 1909-1995. Fineness: 895
<p>Gold occurs in thin bench deposits and shallow-stream gravels in Grant, Illinois, and Mason Creeks that form small tributaries of Yukon River. Heavy minerals are gold, cassiterite, magnetite, ilmenite, hematite, garnet, and tourmaline. Single gold fineness value of 895 recorded. Placers occur within a few kilometers of known or inferred granitic plutons. No known lode deposits. Gold probably derived from polymetallic vein and skarn deposits associated with Cretaceous hypabyssal granitic plutons. Local bedrock is metasedimentary and metavolcanic rocks, and Cretaceous clastic and granitic rocks.</p> <p>Eakin, 1912; Chapman and others, 1963; Cobb, 1973; Bundtzen and others, 1996.</p>			

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
Q05-05 65°10'N 151°00'W	Hot Springs Placer Au-Sn-Nb	Au, Sn, Cr, REE, Cu, Pb, Ag, Ni, Hg, W, Bi, Nb	Production of 17,784 kg Au and about 400,000 kg of Sn.. Years of Production: 1898-1995. Fineness: 740-875

Nearly all placer deposits in district consist of buried bench gravels that occur on old terraces or buried stream deposits derived from older bench gravels. Thick deposits of frozen silt conceal placer deposits and make exploration difficult. Area not glaciated. Principal deposits explored were those on Sullivan Bench. Gold fineness ranges from 740 to 875.

Glen Creek deposit contains an estimated 600,000 m³ grading 2.5 g/m³; over 1.50 million g produced by 1931. Gravels derived from local slate and quartzite with quartz veinlets.

American Creek deposit contains an estimated 410,000 m³ grading 5.3 g/m³. Total production at least 2.18 million g Au. Gold occurs in lower 1.1 m of gravels and upper 1 m of bedrock. Gold in quartz-carbonate veins associated with east-west-trending shear zone. Gold in district possibly related to granitic plutons in area.

Ni-bearing columbite and aeschynite occurs in tailings of drift placer mines near Tofty. Concentrates of tailings contain between 0.2 and 4.5% Nb. Estimated 45,400 kg recoverable Nb₂O₅ in placer deposits near Tofty. Local bedrock consists of Cretaceous sedimentary rocks and Tertiary granitic plutons.

Mertie, 1934; Wayland, 1961; Heiner and Wolff, 1968; Cobb, 1973; Southworth, 1984; Warner, 1985; Warner and Southworth, 1985; Warner and others, 1986; Bundtzen and others, 1996.

Q05-06 65°30'N 150°00'W	Rampart Placer Au	Au, Ag, Bi, W, Sn	Production of 6,103 kg Au.. Years of Production: 1881-1995. Fineness: 900-955
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Bulk of gold production in district occurred in drainages of Minook, Little Minook, Hunter, Hoosier, and Troublesome Creeks. Area not glaciated. At least four prominent terraces occur in Minook Creek, about 3 to 900 m above sea level. Pliocene(?) gravel in highest terrace is up to 20 m thick and auriferous, but not generally commercial. More than half of gold produced in district from Little Minook Creek. Heavy minerals are gold, garnet, barite, chrome spinel, pyrite, cinnabar, native bismuth, and tetrahedrite. Larger deposits are at Ruby Creek, Hunter-Dawson Creek, Morelock Creek, Hoosier Creek, and Little Minook Creek.

Ruby Creek contains an estimated 290,000 m³ grading 0.67 g/m³. Mined mainly by open-cut and drift methods. Hunter-Dawson Creek contains an estimated 250,000 m³ grading 2.6 g/m³; hydraulic and drift mining. Gold occurs in lower 1 m of gravel and upper 1.1 m of bedrock. Local bedrock of shear zone with sulfide minerals and quartz-calcite veins.

Morelock Creek contains an estimated 150,000 m³ grading 3.6 g/m³. Sluice mining. Gold occurs in lower few centimeters of gravel and upper few centimeters of irregular bedrock surface.

Little Minook Creek contains an estimated 120,000 m³ grading 13 g/m³ Au, 1.1 g/m³ Ag. Estimated total production of 2.02 million g Au; gravels vary from 2 to 4 m thick with gold at base and in upper 0.2 m of bedrock. Although most placer gold derived from Pliocene gravels, original source is probably polymetallic vein lode deposits associated with mid to Late Cretaceous monzonitic stocks. Local bedrock is Paleozoic sedimentary and volcanic rocks, and Tertiary granitic plutons.

Mertie, 1934; Waters, 1934; Chapman and others, 1963; Heiner and Wolff, 1968; Cobb, 1973; Bundtzen and others, 1996.

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
Q05-07 64°25'N 154°20'W	Ruby Placer Au	Au, Sn, Bi, REE, Pb, W, Pt	Production of 14,830 kg Au.. Years of Production: 1907-1995. Fineness: 800-890
<p>District displays a complex geomorphic history. Vein quartz, chert, and other resistant rocks are common in placers. Several cycles of erosion and deposition are interpreted. Placer deposits are generally buried and are mined with shafts and drifts. Region not glaciated. Heavy minerals are gold, cassiterite, platinum, scheelite, allanite, and native bismuth. Largest deposit on Long Creek produced nearly half of the district gold through 1993. Bedrock consists of quartz veins in schist in or near granite. District also contains minor placer Sn deposits. Gold in district probably derived from polymetallic vein and skarn deposits associated with Cretaceous hypabyssal granitic plutons. Local bedrock consists of limestone, schist, volcanic rocks, and granitic plutons.</p> <p>Eakin, 1918; Mertie and Harrington, 1924; Cass, 1959; Chapman and others, 1963; Cobb, 1973; Bundtzen and others, 1996.</p>			
Q06-01 67°50'N 148°00'W	Chandalar Placer Au	Au, Sb, Ag, W	Production of 1,460 kg Au.. Years of Production: 1905-1995.
<p>District contains complicated placer deposits that formed during a complicated glacial history. Two generations of placer deposits occur on Little Squaw Creek, one preglacial, one postglacial. Placers occur in streams draining Au quartz vein deposits. Heavy minerals are gold, monazite, magnetite, hematite, rutile, pyrite, arsenopyrite, chalcopryrite, galena, stibnite, molybdenite, scheelite, and uranothorianite. Largest deposits are at Little Squaw and Tobin Creeks. A small placer deposit occurs on Hodzana River, south of the Chandalar Lake. Deposits are both preglacial and postglacial. Significant production. Local Au quartz veins occur in schist. Placers occur downstream from Au quartz vein deposits that occur near the head of Little Squaw Creek drainage. Local bedrock consists of metasedimentary and metavolcanic rocks.</p> <p>Mertie, 1925; Cobb, 1973; Dillon, 1982; Bundtzen and others, 1996.</p>			
Q06-02 65°30'N 148°10'W	Tolovana Placer Au	Au, Sn, Cu, Pb, Hg, W, Cr, Sb, REE, Bi, PGE	Production of 15,439 kg Au.. Years of Production: 1915-1995. Grade: 1.22 g/m ³ , Livengood Creek. Fineness: 897-905
<p>District contains auriferous stream and bench placers. Mature erosion surface largely buried by later sediments. Steam capture common. Rich, buried bedrock benches are not completely exhumed. District is a recently discovered placer district in Alaska. Heavy minerals are gold, magnetite, PGE, hematite, ilmenite, limonite, chromite, spinel, cinnabar, stibnite, scheelite, cassiterite, monazite, and REE minerals. Gold in Livengood Creek and around Amy Dome has narrow fineness range of 897 to 905. Largest deposit occurs at Livengood in Tertiary bench level and may contain 30 million m³ grading 1.44 g/m³ Au. Gold possibly derived from polymetallic vein deposits associated with Cretaceous granitic plutons. Local bedrock is schist, Cretaceous sedimentary rocks, and granitic plutons.</p> <p>Foster, 1966, 1969; Mertie, 1937b; Cobb, 1973; Eakins, 1981.</p>			

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
Q06-03 65°30'N 144°45'W	Circle Placer Au	Au, Ag, Sn, Sb, W, Pb, REE, Mo, Hg	Production of 31,959 kg Au.. Years of Production: 1893-1995. Fineness: 720-920
<p>Gold occurs in alluvial and colluvial deposits (2 to 5 m thick), frequently overlain by 1 to 2 m of muck. Non-glaciated, broad upland of nearly accordant ridge crests. Large gold resource may occur in lower reaches of Crooked and Birch Creeks, and in the topographic trough south of Crazy Mountains. Larger deposits are at Mammoth Creek, Deadwood Creek, Eagle Creek, and Coal Creek.</p> <p>Mammoth Creek contains an estimated 4.0 million m³ grading 1.9 g/m³ Au, 0.45 g/m³ Ag. Estimated production of up to 4.7 million g Au through 1926. Mining by hydraulic and dredge methods. Local quartz veins occur in bedrock. Deadwood Creek contains an estimated 1.44 million m³ grading 2.3 g/m³ Au and 0.49 g/m³ Ag. Estimated total production of over 93.3 million g Au. Mined by dredge and hydraulic methods.</p> <p>Coal Creek contains an estimated 810,000 m³ grading 0.38 g/m³ Au, 0.041 g/m³ Ag. Estimated 311,000 g Au produced. Dredge mining.</p> <p>Eagle Creek contains an estimated 760,000 m³ grading 1.2 g/m³ Au, 0.16 g/m³ Ag. About 0.9 million Au g produced through 1906; recent production in 1985.</p> <p>Gold in district probably derived from Cretaceous or early Tertiary Au-bearing quartz vein, polymetallic vein, skarn, porphyry lode, and volcanogenic massive sulfide deposits in region in mid Paleozoic or older metamorphic rocks of Yukon-Tanana terrane, with recycling through Tertiary conglomerates. Fineness varies widely, depending on drainage system; ranging from 720 to 920. Alluvial diamonds found in placer concentrates during the 1980's. Local bedrock consists of middle Paleozoic or older metasedimentary rocks of Yukon-Tanana terrane, and Cretaceous granitic plutons.</p> <p>Prindle, 1913; Mertie, 1938; Heiner and Wolff, 1968; Cobb, 1973; Yeend, 1982, 1987, 1991; Menzie and others, 1983; Lasley, 1985; Bundtzen and others, 1996.</p>			
Q06-04 64°55'N 146°30'W	Fairbanks Placer Au	Au, Sb, W, Sn, Ag, Bi	Production of 249, 498 kg Au.. Years of Production: 1902-1995. Fineness: 830-900, average 875
<p>Placer deposits occur in streams that radially drain three mineralized areas in Fairbanks District, Ester Dome, Cleary-Pedro Dome, and Gilmore Dome. Nearly all placers consist of buried streams that were ancestral to Cleary, Goldstream, Fairbanks, Engineer, Dome, Eldorado, Treasure, Little Eldorado, Ester, Cripple, Gilmore, and Smallwood drainage basins. Largest placer deposits in Cleary, Fairbanks, Goldstream and Cripple Creek drainages. Deposits are buried by thick sections of frozen loess and mud. Recent stratigraphic and radiometric age studies suggest that most bench deposits in district are Pliocene. Over 30 heavy minerals are identified and include stibnite, scheelite, bismuthinite, native bismuth, and galena. Stibnite and scheelite have been commercially recovered from placers. Early drift mining produced about 55% of gold production of 133 million grams. About 40% of production or 96.1 million grams was recovered from nine-bucket line stacker dredges that operated from 1920 to 1964. The remaining 5% of production was from large open cut mines, mainly from 1975 to the present. The Goldstream Creek pay streak is over 1 km wide and 13 km long, and produced 62 million grams from dredge and drift mining methods. On the richest Cleary Creek, drift mining recovered 2.9 million m³ grading 14 g/m³ or 35.1 million grams from 1903 to 1920. Placer gold derived from: (1) several hundred mineralized veins in Ester Dome and in the Cleary Hill-Pedro Dome area; (2) Au skarns in the Gilmore Dome area; and (3) polymetallic veins associated with Cretaceous plutons at Melba Creek, and Pedro, Gilmore, and Ester Domes.</p> <p>Smith, 1913a; Prindle and Katz, 1913; Mertie, 1918; Heiner and Wolff, 1968; Cobb, 1973; Light and others, 1987; Metz, 1987, 1991; Metz and Hamil, 1986; T.K.Bundtzen, written commun., 1991; Bundtzen and others, 1996.</p>			

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
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Q06-05 64°30'N 145°10'W	Richardson Placer Au-Ag	Au, Ag Hg, Sn	Production of 3,685 kg Au and 2,550 kg Ag.. Years of Production: 1905-1995. Fineness: two types average 900 and 670
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District contains modern stream, bench, and classic residual auriferous placers that occur downslope or downstream lode deposits that occur along or near Richardson lineament. Granite porphyries with gold and gold-silver sulfosalts occur at Mitchell Lode and are probably the source of gold placers in Democrat Creek. Gold in Tenderfoot Creek, the district's largest producer, is derived from a similar granite porphyry sill that intruded along Richardson lineament. Deposit of gold-silver alloy mined on Hinkley Bench is residual accumulation above hydrothermally altered schist and granite porphyry sill. Placer gold consists of two types: (1) high-fineness gold averaging 900 fine; and (2) low-fineness electrum averaging 670 fine and frequently alloyed with native silver. Latter type predominates. Heavy minerals are diverse and include cinnabar, cassiterite, wolframite, silver sulfosalts, and radioactive monazite. Placers are deeply buried by 10 to 45 m of wind-blown and reworked loess. Early placer developments (pre-WWI) were drifts that frequently encountered artesian waters. At least two pay streaks are identified in Tenderfoot Creek, including a false bedrock pay streak located 10 m above bedrock.

Reger and Bundtzen 1977, and T.K.Bundtzen, written commun., 1991; Bundtzen and others, 1996.

Q07-01 65°00'N 142°00'W	Eagle Placer Au	Au, Ag, Cr, Pt	Production: of 1,617 kg Au.. Years of Production: 1895-1991. Fineness: 844-880, average 871
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Gold in district partly recycled through Cretaceous and Tertiary conglomerates. Heavy minerals are gold, platinum, cinnabar, cassiterite, chromite, and native silver. Most of area not glaciated. Gold in district probably derived from combination of Au quartz veins, polymetallic veins, skarns, and porphyry Cu deposits that are associated with Cretaceous or Tertiary plutons that intrude middle Paleozoic or older metamorphic rocks of Yukon-Tanana terrane. Local bedrock consists mainly of metasedimentary and volcanic rocks, and Cretaceous granitic plutons.

Mertie, 1938; Cobb, 1973.

Q07-02 64°20'N 142°00'W	Fortymile Placer Au	Au, REE, Pb, Sn, W, Hg	Production of 16,631 kg Au.. Years of Production: 1886-1995. Fineness: 620-890
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District mostly contains stream and bench placer deposits. Most of area not glaciated. Loess mantles much of area. A 1.71 kg nugget was recovered from Jack Wade Creek deposit. Gold fineness ranges widely between drainages. Highest fineness is in Walker Fork and lowest fineness is in South Fork of Fortymile River. Lode source probably polymetallic quartz-pyrite veins. Mining by hydraulic, drift, dredge, and open cut methods. Gold derived from a combination of Au quartz and polymetallic veins that occur in metamorphic rocks near contacts with Cretaceous or early Tertiary felsic plutons that intrude middle Paleozoic or older metamorphic rocks of Yukon-Tanana terrane. Local bedrock consists of mainly metasedimentary rocks, Cretaceous granitic plutons, ultramafic and mafic plutonic rocks, and Tertiary sedimentary rocks.

Mertie, 1938, Cobb, 1973; Bundtzen and others, 1996.

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
Q52-01 65°54'N 129°45'E District contains several small valley and ravine placers. Deposits range up to 4 km long and 50 m wide. Bench placers also occur. Placer deposits are buried by 1-3 m of alluvium. Gold-bearing beds are less than 2 m thick. Gold occurs irregularly in radial and ore pocket forms. Erosion-caused truncation is minor and does not indicate a wider occurrence of placer deposits. The Chochimbai Creek placer deposit is typical of deposits in this district. Chochimbai deposit occurs as a valley placer that is located in the upper reaches of Chochimbai Creek. The deposit is about 4 km long and 10-50 m wide. Average depth of overburden is about 2 m. The gold-bearing bed is 0.6-3.6 m thick, averagely 1.71 m. Gold grade ranges up to 15 g/m ³ . Near bedrock, gold particles are very large (up to 10.1 mm) and gold nuggets range up to 150 g and constitute 39% of the gold. Bedrock sources are small Au quartz veins and, probable Au polymetallic veins. The deposit is exhausted. Trushkov, 1971; Ivensen and others, 1975; Yu.A. Vladimirtseva, written commun., 1985.	Verkhoyan Placer Au	Au	Grade: Up to 15 g/m ³ Au. Fineness: 703-766
Q53-01 67°23'N 134°11'E District contains about 60 cassiterite placer occurrences that form groups of three to ten placer deposits; each group is closely related to their bedrock sources. Main types are eluvial-slope and ravine placer deposits that range up to some kilometers long and about 100 meters wide. Thickness of the payable bed ranges up to 15-20 m and sometimes larger. Cassiterite is generally fine- to sometimes coarse-grained. Buried placers also occur. A major deposit occurs at Kerbeng Creek. Kerbeng Creek deposit consists of three cassiterite-bearing beds from 4-15 m thick. The paystreak is 100-620 m wide and occurs under 1.7-24 m of overburden. Grades are 330-2,000 g/m ³ cassiterite and 45-81 g/m ³ wolframite. Bedrock sources are Sn quartz veins and stockworks of the Kuturuk mountain. P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.	Verkhne-Yansky Placer Sn	Sn	Grade: Up to 1,169 g/m ³ cassiterite.

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
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Q53-02 66°42'N 137°29'E	Adychan Placer Au	Au	Grade: 0.2-34.4 g/m ³ Au. Fineness: 475-960
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District contains more than 60 placer deposits that are mostly small and non-commercial. Deposits include buried placers in neotectonic depressions (as at Nadezhnoe), and high terrace and valley placers. Deposits in depressions are Miocene to Pliocene. Modern deposits occur on spits. Placer deposits range from 700 to 12,700 m long and 5 to 1,000 m wide. Overburden of glacial drift ranges from 0.4 to 70 m thick and gold-bearing layers are 0.2 to 7 m thick. Gold-bearing gravels in each district occurs as discrete paystreaks of two morphologies, highly elongate and sub-equant. Gold sometimes occurs in rich pockets. Gold particles range in size, and nuggets up to 580 g occur. Associated minerals are cassiterite, wolframite, scheelite, and cerolite. Twenty percent of placers are already mined, and some are currently being worked. Lode sources are Au quartz veins and mineralized shear zones and, less commonly, gold-REE deposits related to granitoids. Major deposits are at Adychanskoe, Adycha, Nadezhnoe, and Lazo.

Adychanskoe deposit occurs on the Adycha River terrace 75-100 m above river level. Deposit is 12.4 km long and up to 1 km wide. The gold-bearing bed is 0.3-1.9 m thick. Au grade is 0.72-11.82 g/m³. Gold particles differ in size and roundness. Gold forms intergrowths with quartz, chlorite, and galena. Gold fineness is 832-844.

Adycha deposit occurs on a large spit in the Adycha River. Deposit is about 2 km long, and the gold-bearing bed is 0.4-2 m thick. Au grade is 0.01-30 g/m³. Gold particles are well-rounded, 2-5 mm in size; gold fineness is 740-810. Gold distribution is irregular, radial, locally in ore pockets.

Nadezhnoe deposit is about 3 km long and occurs within a graben. The gold-bearing bed is 0.6-3.6 m thick and occurs below 70 m of overburden. Gold grade is 2.62-34.4 g/m³. Gold particles average 1-6 mm, gold fineness is 640-880. Associated minerals are cassiterite, scheelite, wolframite, magnetite, ilmenite, and arsenopyrite. Bedrock sources are Au quartz and gold-REE veins and zones, including the Delyuvialnoe deposit.

Lazo deposit is a typical valley placer deposit. It is 6 km long and displays a narrow radial distribution of mineralization. The gold-bearing bed is 1.33 m thick and buried 0.2-1.3 m deep. The commercial part of the deposit is 2-6 m wide. Gold particles are 2-12 mm in size, and gold nuggets up to 5.3 g have been found. Bedrock source is the Lazo Au quartz vein deposit.

Rozhkov and others, 1964; Trushkov, 1971; Yu.A. Vladimirtseva, written commun., 1985.

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
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Q54-01 64°33'N 142°50'E	Verkhne-Indigirsky Placer Au	Au	Grade: 2.6-650 g/m ³ Au. Fineness: 730-969
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District contains more than 250 different and non-contemporaneous placer deposits. Most deposits are flood-plain and bench placers that occur in Holocene and interglacial deposits. Three stages of placer formation occurred in the Oligocene-Miocene, Pliocene-Early Pleistocene, and Late Pleistocene-Holocene. Highest-grade deposits are Pliocene-Early Pleistocene as at Sana, Bazovy, Dirin-Yuryak, and Elgi. These deposits occur in intermontane depressions that formed along deep fault zones. Placers occur on terraces 6 to 200 m above river level. Most have 0.2-20 m of overburden, but some have up to 150 m. Gold-bearing beds are 0.2-6.6 m thick and gold grades range up to 1 kg/m³ (as at Sana). Gold nuggets up to 5 kg weight are found. Commercial placers are mostly confined to Late Pleistocene and modern fluvial deposits. These deposits have 10 m or less overburden, and are 0.5 to 15 km long, with gold-bearing beds that range 1-6.8 m thick and gold fineness of 582-907. Major deposits occur at Promezhutochny Creek, Tuora-Tas Creek, Khangalas Creek, and Kurun-Agalyk Creek.

Promezhutochny Creek consists of a buried placer deposit that occurs in Neogene-to-Early Pleistocene gravel. The thickness of overlying alluvial, colluvial, and glacial deposits varies from 50 to 140 m, and averages 63 m. Gold grade is 8.6 g/m³. The gold-bearing bed is 3.28 km long and averages 62.8 m thick. The majority of the gold (80%) is confined to the bedrock eluvium. Large gold particles comprise less than 10%; fineness is 840-863%, average is 849. Gold is associated with arsenopyrite, pyrite, anatase, and garnet.

Tuora-Tas Creek flood-plain gold placer is 10 km long and occurs in a broad valley with multiple well-formed terraces. The gold-bearing bed is about 1.5 m thick, gold fineness is 798, and gold particles are about 4 mm in size.

Khangalas Creek deposit consists of flood-plain and bench placers that range up to 3 km long and 150 m thick. Some individual paystreaks are 180-1,000 m long, 0.4-3 m thick, and have 0.4 to 6 m of overburden. Gold fineness is 850. Bedrock sources of are gold-quartz veins of the Khangalas deposit.

Kurun-Agalyk valley placer is 5,500 m long and 20-150 m thick. The gold-bearing bed is 0.2-3.6 m thick, with 2-3 m thick overburden. Gold fineness is 856-891 and gold particles are 0.5-8 mm in size.

Pepelyaev and others, 1964, B.V. Pepelyaev, written commun., 1964; Skryabin, 1964; Trushkov, 1971; Yu.A. Vladimirtseva, written commun. 1987; Oleinikov, 1992.

Q56-01 65°04'N 152°57'E	Shamanikho-Stolbov Placer Au	Au	Grade: 3-15 g/m ³ Au at Glukhariny deposit. Fineness: 820-960
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District contains fifteen placer gold deposits that overlie Proterozoic metamorphic complexes. Unlike placers in tectonically active zones, as those near Uct's-Omchug and in the Central Kolya region, the placer deposits of the Shamanikho-Stolbov district occur in a deeply eroded, mature region with a passive recent tectonic history. Principal placers range from Neogene to Lower Quaternary. These deposits, including the Stolbovaya and Glukhariny deposits, occur in river valleys at depths of 15-70 m and have widths of up to 300 m. Late Pliocene to Holocene placers are less important. Gold grains are moderately rounded and have undergone secondary attenuation in the form of coatings of hydroxides of iron up to 2.2 mm thick. Younger placers occur both in stream valley and terrace alluvium, where average gold grain size is about 1.3 mm. Neotectonic block subsidence occurred in some valleys with formation of auriferous deposits up to 8 m thick. Gold fineness ranges from 820 to 960. Low-sulfide stockwork zones and rare quartz veins with gold contents of up to 20 g/t are interpreted as original lode sources of the placer deposits. A major deposit occurs at Glukhariny.

Glukhariny deposit formed in a complex alluvial environment and consists of valley-thalweg deposits of Lower to Upper Pleistocene age, and karst placers of Pre-Quaternary age. Both types are been buried in the Glukhariny alluvial basin. The karst type formed in Proterozoic limestone. Deposit is characterized by extremely irregular, but rich accumulations of gold. Thickness and width of auriferous gravels average 8 m and 220 m respectively. Gold grains are moderate size (3-4 mm), poorly rounded, and contain coatings of hydroxides of iron. Maximum concentrations of gold occurs where shaly deposits fill karst holes and depressions. Younger portions of placer deposits within older thalwegs where unconsolidated river gravel ranges from 20 to 70 m thick and is up to 220 m wide. Gold grains range in size from 0.25 mm to 2.2 mm. Gold fineness from 830 to 960.

P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
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Q57-01 67°39'N 160°39'E	Khetachan Placer Au	Au	Grade: 3-15 g/m3 Au. Fineness: 860
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At least 12 placer deposits in district occur discontinuously within a region transitional between the mountainous area of Kuryin Ridge and the Anyui lowland. The most important placer deposits are at Dalniy, Topolevka, and Ruslan. The placers are buried under a thick section (up to 40 m) of Upper Pleistocene rock debris and silty deposits of the Yedom Formation. Placers occur in banded alluvial deposits that are confined to alluvium on or near bedrock. Weathering into the sedimentary and granitoid bedrock ranges up to 3 m thick. Auriferous zones range in thickness from 1 to 3.5 m. Alluvial-talus placers also occur and are associated with weathering crusts; however, gold reserves are not significant. Age of the majority of placers is pre-Upper Pleistocene, probably Lower Pleistocene. Gold grains are small (averaging 0.97-1.53 mm); local gold grains average less than 0.5 mm in diameter. Interpreted source lode deposits are quartz-sulfide zones that are spatially associated with Cretaceous gabbro-syenite intrusions. Most mineralized lode zones contain up to 7 g/t gold, but bonanza contents are also known. These mineralized zones are interpreted as a porphyry Cu deposit.

P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.

Q57-02 67°16'N 159°35'E	Innakh Placer Au	Au	Grade: 2-8 g/m3 Au at Uzhasny deposit. Fineness: 800-860
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District contains about 20 placer deposits that occur in third-order stream drainages that are radially distributed around a massif composed of Cretaceous syenite and diorite. Placer formation was influenced by high-angle and vertical fault movement. Valley of Springs deposit occurs in tributaries of the Omolon River and is buried by 30 to 50 m of thick slope deposits. Placer deposit age ranges from Upper Pleistocene to Holocene. Gold grains are typically small. The original lode sources of the gold are deformed sulfide zones and sparse quartz-sulfide veins and stockwork zones that are associated with Cretaceous syenite-diorite. A major deposit is at Uzhasny.

Uzhasny placer alluvium deposit occurs in third-order stream valleys about 7 km long formed in banded gravels to depths of 5-20 m. Auriferous pay zones average 1.6 m thick. Gold grains in lower gravels average 0.73 mm in size, upper gravels average 1.3 mm in size.

P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.

Q57-03 65°26'N 157°24'E	Visualnin Placer Au, Ag	Au, Ag	Grade: 1-15 g/m3 Au, and up to 50 g/t Ag. Fineness: 525-924
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District contains more than 20 placer deposits that occur in the Omolon massif and include the Rassokha, Burgachan, and Bulun deposits. Deposits are confined to second- to third-order stream valleys. Placer deposits range from Upper Pleistocene to Holocene and consist of shallow alluvial gravels that range from 3 to 8 m thick. Auriferous zones are 0.6 to 2.2 m thick and include gold within altered bedrock. Gold grains are small to very small in size, averaging 0.97 mm. Small native silver nuggets occur in some of the placer deposits. The original lode sources are silica-sulfide zones that occur in brecciated rocks, and low-sulfide Au quartz and quartz-carbonate veins. Gold ranges up to a maximum of 15 g/t.

P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
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Q58-01 67°45'N 167°51'E	Aliskerov Placer Au	Au	Grade: District average: 0.5-11 g/m ³ Au, Egilkynveem: 0.87 g/m ³ Au. Fineness: 812-845
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District is analogous the Keperveem district, but contains a smaller number of placer deposits (about 25) with lower gold concentrations. The largest placers are confined to forth-order stream valleys. Placers are shallow with overburden averaging 8.2 m thick. Gold grains are small and tabular. Nuggets are very rare. Deposit is zoned with regard to gold fineness and grain size. Quartz veins containing up to 3 to 25 g/t gold, and shear zones with 1.5 g/t gold are interpreted as lode sources. A sample deposit is at Egilkynveem.

Egilkynveem deposit is confined to a fourth-order stream valley and can be traced for more than 8 km. The deposit is narrow, with maximum widths of 20 m and depths of 5-6 m. Gold fineness ranges from 812 to 820. Deposits was exhausted by hydraulic mining.

P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.

Q58-02 66°58'N 166°44'E	Stadukhin Placer Au	Au	Grade: 2-10 g/m ³ Au. Fineness: 822-907
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Placer Au deposits occupy a large area. Commerical exploitation focussed in the Yarakvaam area where at least 12 placer deposits have been worked. Holocene alluvial placers are dominant. Late Pleistocene alluvial terraces of sediment buried 25-30 m deep also occur. Gold-bearing stream channels that occur in hanging tributaries are exposed in valley walls by erosion by large trunk glaciers. The largest placer deposit occurs in the flood plain of the Karalveem River, and on two sets of alluvial terraces at 10-15 m and 25 m above the valley floor. Placer deposits in the Khrabtovy River drainage occur along an extinct ancestral drainage system and are concentrated on granitoid bedrock. Gold grain size ranges from 0.7 to 2.2 mm. Lode sources are low-sulfide Au quartz veins and silicified zones up to 1 m thick and containing up to 20 g/t Au.

P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.

Q58-03 66°13'N 164°36'E	Bayimka Placer Au	Au, Ag, Cu, Pt	Grade: 1-12 g/m ³ Au (district average). Fineness: 673-934, average 824
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District contains at least 40 placer gold deposits that occur discontinuously in a north-northwest trending belt that is 150 km long. Valley alluvial placers occur in first-to-third order stream drainages. Gold-bearing alluvial terraces and alluvial talus 10-25 m occur above the valley, are Upper Pleistocene in age, and are poorly preserved. Most of the deposits are interpreted as Holocene. Gold grains are generally small. Ferruginous coatings on grains are common. Lode sources are interpreted as zones of Au-Ag sulfides that are associated with a porphyry Cu stockwork. Lode deposits contain between 0.26 and 20 g/t Au. Main placer deposits are exhausted. A sample deposit is at Krivoy.

The Krivoy placer deposit occurs in talus and alluvium in a small, steep stream with an asymmetrical profile. The deposit is one of the largest placers in the Bayimski District. Gold-bearing talus deposits occur as far upstream as the river head; but deposits near the river mouth contain the most concentrated resources and are the most extensively developed. Auriferous placers range up to 150 m wide. Greenish-yellow gold with fineness values averaging 720 prevails. Au-Ag quartz-carbonate veins and sulfide zones are the principal lode sources.

P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
Q59-01 67°58'N 170°06'E District occurs in the Chaun lowland in an old, ancestral river drainage system that is not expressed in modern drainage patterns. The main placer deposits are part of the buried Oligocene-Miocene age Chaanay River valley, and are among the oldest placer systems known in the Russian Northeast. Placers are multiply stacked, alluvial, and extend for a length of 11 km. Two buried alluvial terraces at the 15-20 m and 30-40 m levels, relative to the thalweg, are identified. Gold-bearing placers occur below sea level, average 30-40 m in thickness, and are buried under unconsolidated deposits ranging from 50 to 120 m thick. Separate pay channels range from 30-200 m wide, contain localized bonanza zones, and exhibit a variable gravel thickness ranging from 0.6 to 6.4 m. Gold grain size ranges from 0.4 to 1.6 mm. Gold grains are coated with Fe hydroxides. Heavy minerals are cinnabar and cassiterite. Placer deposits are partly exhausted. Lode sources are not identified. P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.	Chaanay Placer Au	Au	Grade: 5-6 g/m ³ Au. Fineness: 900-960
Q59-02 67°58'N 170°41'E District contains seven placer Sn deposits that occur in a transitional zone between the Chukotka upland and the Chaun plain in an area of low-mountain relief. The placer deposits occur in first- to fourth-order stream valleys (as at Oleniy, Ptichiy) and sixth-order stream valleys (as at Lenyuveem). Pay zones of Upper Pleistocene to Holocene age range up to 2 km long and are generally simple single-layered deposits. Deeply-buried (40 m and deeper) placers of Lower- to Upper-Pleistocene age are between 2 and 5.5 m thick, contain 600 to 1700 g/m ³ cassiterite, and are deep placers that occur in gravel deposits. Small eluvial-talus placers are associated with stockworks in the Ptichiy deposits. Source lode deposit composed of cassiterite and quartz. P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.	Omrelkai Placer Sn	Sn	Grade: 600-1700 g/m ³ cassiterite.
Q59-03 65°02'N 172°30'E District contains more than 18 deposits of Late Tertiary to Holocene age and are characterized by a complex geomorphology. Gold occurs in crevices up to 1.7 m in bedrock. Main part of associated drainage system was formed in Late Tertiary; Quaternary valleys partly inherited the ancestral Tertiary channels. All deposits are alluvium placers; majority occur near the surface. Thickness of gold-bearing stratum ranges from 0.4 to 5.2 m. Gold is of small grain size (up to 3 mm). Nuggets weighing up to 4 kg have been found. Cinnabar and rare platinum are observed. The majority of the placer deposits are exhausted. Lode sources are Au quartz veins and zones with low gold content. A sample deposit is at Otrozhnaya. The Otrozhnaya placer deposit is one of the largest in the Otrozhen District. The lower part of the deposit occurs in the Udachnen hollow and was deposited on late Tertiary sediments. Formation occurred mainly in the Middle Pleistocene to Holocene. Deposit ranges up to 300 m wide and from 0.8 to 2.2 m thick. Productive stratum is confined to the lower part of alluvial deposits. Average size of gold particles is 4.3 mm, and roundness is poor. Gold is distributed in elongate streaks. Placer gold content is highly variable from trace amounts to 20 g/m ³ . P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.	Otrozhen Placer Au	Au	No data. Fineness: 830-975

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
Q60-01 64°58'N 178°48'E Placer gold discovered at Zolotoy Ridge in 1906. This small district contains 8 placer deposits that formed from the Early Pleistocene to Holocene. Valley-alluvial placers are predominante and occur mainly on an igneous bedrock. Placer paystreaks reach a maximum length of 160 m. Placer deposits are buried to depths of 20 m. Thickness of gold-bearing stratum ranges from 0.6 to 1.5 m; rarely to 2.7 m. Gold particle size ranges from 0.9 to 2.1 mm. Gold fineness is 837. The Pravaya Kolbi placer deposit of Early Pleistocene age is buried to depths of 32 m. Small gold placer deposits occur along the shoreline of Anadyr Bay in modern marine sediments. Lode sources are Au quartz veins and zones, and Au-bearing dikes. P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.	Zolotogorsk Placer Au	Au	Grade: 5-7 g/m3 Au. Fineness: 850-860
R01-01 68°02'N 178°55'W District contains more than 27 placer deposits that are occur near the Iultin tin-tungsten lode deposit. District is in moderate relief area that has been modified by glaciation. Placers consist of alluvial, valley-fill, deeply-buried, and complex types. Latter occur at Iultinskaya, Granitny, and Lenotan. Wolframite and rare gold are commercial. Placer deposits are concentrated in second- to fourth-order streams and formed from Early Pleistocene to Holocene. Upper Pleistocene to Holocene talus-alluvial placers are poorly developed. Placers exhibit variable thickness. Thickness of pay gravels ranges from 1.5 to 10 m. Associated Sn lode deposits occur at Iultin, Svetloye, Solnechnoye, and Severnoye. P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.	Iultin Placer Sn, W	Sn, W, (Au)	Grade: 200-650 g/m3 cassiterite.
R53-01 70°20'N 134°17'E District contains several different placer deposit types, including: buried Paleogene-Neogene placers which occur at the base of superimposed depressions, and small ravine placers which are Late Quaternary. District contains about ten known placer deposits of variable length and width. Gold-bearing beds covered by up to 150 m of overburden. Gold particles are small in size (0.1-3.5 mm) and average 0.8-1 mm. Flattened gold particles predominate. Gold-bearing gravels form elongate zones. Valleys are up to 1,200 m wide and contain paystreaks are up to 100 m wide. Equant and elongate weathering crusts up to 30-50 m thick are wide-spread. Most of the placers were formed by water-reworking of weathered crust material during the early Oligocene. The bedrock sources of the placer deposits are Au quartz veins and zones, and Au-REE and Au-Hg deposits. Major deposits are at Kara-Onkuchak and Burguat. Kara-Onkuchak placer occurs in an ancient buried valley, consists of a gold-bearing bed up to 10-20 m thick, and is formed in an Lower Oligocene alluvial gravel with quartz pebbles (50%) cemented with light-grey sandy clay. Overburden is about 100 m thick. Average size of gold particles is 0.5-1 mm and fineness 795-815. Burguat bench placer deposit of Early Pleistocene age occurs on an aggradation-denudation terrace that is 15-20 m above river level. Pay gravels consist of quartz pebbles (20%) and clastic rocks of the Vekhoyan Formation. Gravels are cemented with argillaceous sand. Pay gravels are underlain by a weathering crust in the middle section of the river and by Miocene gravel in the lower reaches of the river. Some gold-bearing layers occur in the thalwegs of buried ancient valleys. Gold-bearing gravel beds range up to 10-15 m thick. Average size of gold particles ranges from 0.88 to 1.44 mm. Gold fineness is 680-886, with the maximum in the middle portion of the deposit. Ivnsen and others, 1975; Samusikov and Sergeenko, 1974; Arsky and others, 1963, Yu.M., written commun., 1963; Amuzinsky and others, 1988.	Kular Placer Au	Au	Grade: 0.5-26 g/m3 Au. Fineness: 391-962

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
R54-01 69°42'N 140°22'E	Polousnensky Placer Sn	Sn	Grade: Up to hundreds g/m3 cassiterite .
<p>District contains several tens of cassiterite-bearing zones. The Deputatskaya and Omchikandinskaya placer deposits are most important. Placers in this district are located near granite intrusions and are closely related to bedrock sources. Close bedrock-placer proximity is characteristic of the district. The Sn placers are mostly alluvial; more rarely are eluvial-diluvial. The most important Sn placers are associated with lode stockworks. The amount of cassiterite is variable, and may exist in association with wolframite and sometimes with bismuth nuggets. Cassiterite is coarse, 40-50% is larger than 7 mm. Boulders of cassiterite occur. Example deposits are at Deputatsky Creek and Omchikandya Creek.</p> <p>Deputatsky Creek placer deposit occurs in a broad valley with multiple well-formed terraces. Overburden ranges from 3-4 m to 8 m thick. Distribution of cassiterite is rather regular. Within the mineralized layer, finer-grained cassiterite occurs in the upper portion, and coarser-grained cassiterite in the lower parts. The bedrock source is the Polousnensky lode deposit.</p> <p>Omchikandya Creek placer deposit occurs in a broad valley with multiple well-formed terraces. Deposit forms a continuous wide band that completely fills the valley. The deposit is more than 3 km long and is either not overlain, or is overlain by a few meters of overburden. The pay zone is 20-30 m thick. Minerals are cassiterite (larger than 7 mm fraction of 40-50%) and wolframite. Cassiterite to wolframite ratio of 2:1 to 3:1. Bismuth nuggets to 1 kg are common. Lode source is the Polyarny deposit.</p> <p>Epov and Sonin, 1964; O.G. Epov and G.S. Sonin, written commun., 1964; Trushkov, 1964, 1971.</p>			
R54-02 68°17'N 141°39'E	Khatynnak-Sala Placer Au	Au	Grade: Up to 10-15 g/m3.
<p>District contains several gold placer deposits that occur at several horizons. The placers are not long. Gold is fine and platy. Placer gold occurs in gravel overlying Paleozoic limestone. One example is at Khatynnak-Sala Creek.</p> <p>Khatynnak-Sala Creek placer deposit occurs in a broad creek valley that contains multiple, well-developed alluvial terraces. The alluvial placer is 7.5 km long and about 90 m wide. The gold-bearing placer is 0.2-1.8 m thick. Gold has also accumulated in fissures and cavities in the Paleozoic limestone bedrock to depths of 1 m. The placer deposit is overlain by 5 to 8 m of overburden. Gold is fine and platy and is often present in the form of intergrowths with quartz and calcite. Gold occurs in association with zircon, ilmenite, magnetite, pyrite, galena, and chalcopyrite.</p> <p>O.G. Epov and G.S. Sonin, written commun., 1964; Trushkov, 1971.</p>			

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
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R58-01 68°07'N 165°60'E	Keperveem Placer Au	Au, W, Sb	Grade: 3-15 g/m ³ Au (Karalveem deposit). Fineness: 800-950; average of 900
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District contains at least 50 placer deposits that are largely confined to Upper Pleistocene to Holocene, forth-order stream valleys. Adjacent auriferous terrace alluvium contains subordinate gold. Auriferous zones 0.8 to 3.3 m thick are buried by 14 m of overburden. Placers are commonly contain two gold-bearing layers. Glacio-fluvial placers occur in the Enmyveem River basin that is glaciated. Placers are buried under Upper Pleistocene glacial deposits and occur at a depth of more than 90 m. Fineness decreases at the flanks of the district. Au quartz veins in Triassic gabbro-diorite and sedimentary rocks, and rare Au quartz zones, that contain 3-40 g/m³ gold, are interpreted as the lode source. An example deposit is at Karalveem.

Karalveem deposit comprises a continuous placer that is 10 km long in the Karalveem River valley. The placer extends downstream from the mouth of the Byezymanny River and occurs in a forth-order drainage system. The placer is composed of auriferous sandy-pebble deposits that are Upper Pleistocene to Holocene. Bedrock surface underneath the placer deposits is relatively even, and bedrock is composed of sandstone, shale, and diorite. Multiple pay layers occur, with auriferous zones ranging up to 5 m where layers join. Gold is commonly coarse (averaging 2-6 mm) and nuggets weighing more than 1 kilogram are found. Average gold grains range from 2 to 6 mm. Deposit has a maximum width of 300 m. Gold increases where the valley narrows. Heavy minerals are galena, ilmenite, and scheelite. Lode source is the Cretaceous age Karalveem Au quartz vein lode that contains up to 40 g/t gold.

P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.

R59-01 69°52'N 171°35'E	Northern Placer Sn	Sn	Grade: 200-600 g/m ³ cassiterite.
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District contains more than 55 placer deposits and occurs in the northern part of the Chaun Mesozoic fold belt in a region of moderate relief. Most placers are near-surface alluvial deposits that occur in first- to third-order stream valleys. The placers form single-stratum concentrations of Upper Pleistocene to Holocene age. Multiple pay layers are rare. Cassiterite placers extend for 11 km, average 0.6 to 1.2 m thick, contain 200-600 g/m³ cassiterite, and locally contain up to 1500 g/m³ cassiterite. Eluvial-talus placer deposits occur near the Terrace and Olovnyanny Sn lode deposits. Placers are mainly monomineralic, but small admixtures of gold, wolframite, and scheelite occur. Most placer deposits in the Northern District are now exhausted. Cassiterite grains are small (1-2 mm, rarely 5-8 mm). Lode sources are Sn silicate stockworks, zones, dikes, and rare veins. Sn lode deposits contain from 0.5 to 1.0% Sn.

P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.

R59-02 69°29'N 171°58'E	Perkakay Placer Sn (Au, W)	Sn, (Au, W)	Grade: 200-800 g/m ³ cassiterite.
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District occurs in the central part of the Chukotka Mesozoic fold belt in an area of moderate relief. More than 23 placer deposits are closely associated with the lode sources, and occur in second- to fifth-order stream drainages. Placers are of Miocene to Holocene age. Pre-Quaternary placers formed in areas with extensive chemically-weathered crusts up to 10 m thick. Late Pleistocene to Holocene placers are alluvial, valley-fill, and eluvial-talus types. Valley placers are 5 km long and contain gravel ranging in thickness from 2 to 3.6 m. Placers contain both single and multiple pay layers. Cassiterite content of placers is 200 to 800 g/m³; wolframite, gold, topaz, garnet, and sulfides also occur. Gold and tungsten grades are not high, but are recovered as by-products. Lode sources are Au quartz-sulfide veins, stockworks, and shear zones that contain cassiterite and sulfides. Cassiterite in lode deposits is fine-grained (0.1 mm) with a few large crystals ranging up to 1-2 cm.

P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
R59-03 69°08'N 172°53'E	Ichuveem Placer Au, Sn	Au, Sn, W	Grade: 2-15 g/m ³ Au (M. Ichuveem deposit). Fineness: 850-900
<p>District contains at least 30 placer deposits that occur in valley bottoms of second- to sixth-order streams. Placers are mainly Holocene age. Upper Pleistocene placers occur in the terrace alluvium at 10-12 m elevations, and are rarely higher. Thickness of pay zones ranges from 1.4 to 2.0 m; width of terrace alluvial placers ranges up to 700 m. Most gold grains average less than 2 mm in size; however, commonly nuggets range up to 2 kg. Placer deposits along Promyeshutochny River differ from others in the district and are characterized by small grain size and low gold fineness. Placer deposits along Mlelyuveem River contain up to 400 g/m³ Sn and locally more. Low-sulfide Au quartz veins and rare shear zones and dikes of intermediate composition are interpreted as lode sources. An example deposit is M. Ichuveem.</p> <p>M. Ichuveem placer Au deposit generally occurs in valley bottoms of forth- to sixth-order streams, and less commonly in terrace alluvium at levels of 7-8 m. Thickness of gpay zones ranges from 1.2 to 3.2 m, rarely up to 5 m. Overburden thickness ranges from 25 to 70 m. Gold particles have a broad range of shapes, including scales, tables, and plates. Gold grains ranges from 0.2 to 8 mm. Average fineness of 822. Placers are mainly exhausted; with deep technogenic placers currently being exploited.</p> <p>P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.</p>			
R59-04 68°32'N 168°38'E	Rauchan Placer Au	Au	Grade: 3-7 g/m ³ Au (Gremuchaya deposit). Fineness: 874-896; rarely to 917
<p>District contains more than 20 placer gold deposits that occur in second- to fifth-order stream drainages. Deposits are mainly Late Pleistocene. Average thickness of pay zones is 1.4 m. Gold grains are generally very small, but nuggets weighing several hundred grams have been recovered. Gold is poorly to moderately rounded. Au quartz-carbonate veins and sulfide shear zones are interpreted as lode sources that contain up to 5 or 6 g/t Au; rarely more. An example deposit is at Gremuchaya.</p> <p>Gremuchaya placer deposit is more than 12 km long and occurs in an old thalweg at depths between 8 and 25 m. Pay zones range from 2.7 to 5 m thick. Gold ranges from 0.8 to 1.5 mm, with average fineness of 917. Placer deposit is mostly exhausted. Lode sources are uartz-chlorite and quartz-carbonate veins with sulfides that contain up to 0.5 to 20 g/t Au.</p> <p>P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.</p>			
R60-01 68°49'N 174°60'E	Pegtymel Placer Sn	Sn	Grade: 270-1000 g/m ³ cassiterite.
<p>District contains twelve placer deposits and is located along the boundary between Mesozoic sedimentary rocks of the Chukotka terrane and the Okhotsk-Chukotka volcanic-plutonic belt. Placer deposits occur in first- to forth-order streams as buried alluvial thalwegs, with several pay zones that range up to 7 m thick and occur at depths of 3 to 40 m. Minor amounts of gold occur in the placers. Cassiterite crystals range in size from 1 to 2 mm. The Lunnoye Sn quartz deposit is the source for the placer deposits.</p> <p>P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.</p>			

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District No. Latitude Longitude Summary Description References	District Name Deposit Type	Major Commodities Minor Commodities	Grade and Tonnage
R60-02 69°14'N 178°25'E	Ryveem Placer Au	Au, Ti, Agate	Grade: 1-25 g/m ³ Au (Lower River and Coastal Plain deposit). Fineness: 700-866
<p>District contains more than 15 placer deposits that occur in valleys of first- to fifth-order streams and in the near-shore coastal plain of the Chukotsk Sea. Most deposits are alluvial, but one is of strandline. The age of most placers is lower to middle Pleistocene, with minor deposits of upper Pleistocene to Holocene age. Most placers are covered by overburden ranging in from 8 to 50 m thick. Coastal placers are the thickest and range up to 5 to 8 m thick. Grains averages 2 mm in diameter. Gold grains are commonly coated with greigite (Fe₃S₄) and iron hydroxides. Principal admixtures in gold bullion include silver, copper, and iron. Ilmenite, scheelite, and other minerals also occur. Low-sulfide Au quartz veins and silicified shear zones with up to 15 g/t Au are the lode sources. The lodes occur in Paleozoic clastic deposits. An example is the Lower River and Coastal Plain deposit.</p> <p>Lower River and Coastal Plain placer deposit are of alluvial and coastal marine origin and occur in the lower part of Ryveem River valley and Valkarai lowlands. Both types of deposit are interpreted as Pliocene to Pleistocene in age. Exceptionally wide valley placers range from 4 to 7 km in width. Rich bonanza-grade placers occur in zones of extensive weathering with increasing thickness of pay zones. Multiple pay zones are common. Pay zones in the lower parts of the river are usually less than 1 m thick. Gold is localized in pods. Gold grains are poorly rounded and average 2 mm in size. Gold fineness ranges from 814 to 866. Strandline placers occur subparallel to the coastal plain and consist of several parallel pay zones. Gold concentrations occur along the contacts of consolidated and unconsolidated deposits. Iron oxide coats gold particles. Exploration in progress.</p> <p>P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.</p>			
R60-03 68°43'N 178°19'E	Kuvet Placer Au	Au	Grade: 4-8 g/m ³ Au. Fineness: 865-895
<p>District contains more than 12 placer deposits that occur in the Kuvet River basin and at the head of the Kuekvunya River. The more important placers occur along the Kuvet River and tributaries. Placers occur as buried, valley, and alluvial types and are Upper Pleistocene. Sediment overburden ranges from 20 to 100 m thick. Pay zones range from 0.4 to 2.2 m thick, and are up to 200 m wide. Gold occurs in individual, narrow paystreaks. Distribution of gold is irregular, with some pay zones up to one km long. Bonanza concentrations occur locally. Gold is mainly well-rounded, ranging in size from 0.75 to 3.5 mm. Small nuggets have been recovered. Placers are partly exhausted. Low-sulfide Au quartz and quartz-carbonate veins and zones of silicification and brecciation are the lode sources. Lode deposits contain 4 to 12 g/t Au.</p> <p>P.O. Genkin and E.A. Sinuygina, written commun., 1973; M.E. Gorodinsky, written commun., 1991.</p>			
S54-01 72°13'N 140°05'E	Chokurdak Placer Sn	Sn	Production of about 100 tonnes. Grade: 100-2,000 g/m ³ Sn, locally up to 18.9 kg/m ³ cassiterite.
<p>The main placer deposits in district occur just offshore in ravines of small creeks. The sea-beach placer is 1,700 m long and 10 to 110 m wide. Offshore extent of the deposit is unknown. The tin-bearing bed is 1-2 m thick. Cassiterite is fine-grained (0.25-2 mm) and forms intergrowths with tourmaline and quartz. Cassiterite is associated with arsenopyrite, pyrite, ilmenite, magnetite, and chalcopyrite. Two ore-bearing horizons are known, an upper one that overlies both sea gravels, and a lower one that overlies false bedrock. Lode source is the Chokurdak deposit.</p> <p>D.S. Sorokov and D.A. Voitsekhovskiy, written commun., 1961; Trushkov, 1964; Prokhorova and Ivanov, 1973.</p>			